

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2469.—VOL. LII.

LONDON, SATURDAY, DECEMBER 16, 1882.

[WITH SUPPLEMENT.] {PRICE SIXPENCE.
BY POST, £1 4s PER ANNUM.

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER
AND MINING SHARE DEALER.**
No. 1, FINCH LANE, CORNHILL, LONDON E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.
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Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—

10 Almada, 13s. 6d.	75 Indian Glenrock, 13s. 6d.	30 Parys Copper, 7s. 6d.
25 Bedford Unit., £1 17 6	75 Indian Phoenix, 17s.	10 Phoenix Unit., £2 11 3
25 Bratsberg, 42s.	50 Indian Trevelyan, 6s. 6d.	50 Panulillo, £6 11s. 3d.
75 Carnarvon Cop., 7s. 6d.	50 Kapanga, 17s.	50 Prince Wales, 13s.
50 Callao Bis, 8s.	30 Killifreth, £3 1/4.	100 Pestana, 4s. 9d.
80 Chile Gold, 15s. 6d.	50 La Plata, £1 12s.	20 Ruby, £1 1s.
50 Colombian Hyd., 7s. 3	50 Langford, 10s.	50 Rhodes Reef, 12s.
30 Consolidated, 5s.	50 Last Chance, 9s.	25 Richmond, £7 11s. 3d.
50 California, 20s. 6d.	10 Leadhills, £3 1/4.	10 Roman Grav., £3 7s. 6d.
75 Devala Cen., 8s.	25 Marke Valley, 12s.	25 Sierra Buttes, £1 12
50 Devala Moyer, 13s.	10 Mona, £4 10s.	10 S. Condurrow, £10.
20 D'Ersby Mount, 15s.	50 Mounts Bay, 5s.	50 South Darren, 17s. 6d.
25 Devon Consols, 45 1/2.	25 Morfa Du, 5s.	50 S. E. Wynad, 18s.
10 Devon Friendship, 10s.	50 Mysore Gold, 8s.	50 So. Devon Unit., 15s.
70 Don Pedro, 3s. 9d.	75 Mysore Reef, 1s.	75 Sortridge, 6s.
20 Drakewall, 7s.	50 New Caradon, 6s. 6d.	100 Simons Reef, fully paid, 1s. 3d.
50 East Blue Hills, 9s. 6	100 No. Blue Hills, 2s. 6d.	10 South Penstru., 10s.
50 Eberhard, 8s. 9d.	25 New Kitty, £2 10s.	50 Tambracherry, 13s. 9d.
30 East Chiverton, 5s.	50 No. Herodsfoot, 1s. 6d.	50 Tanker. Gt. Con., 5s. 9
50 East Lovell, 10s.	80 Nouv. Monde, 6s. 9d.	50 Tresavean, 10s.
20 E. Roman Grav., 4s.	20 North Penstru., 10s.	10 Van, £5 1/4.
50 East Wheel Rose, 10s.	35 New W. Caradon, 10s.	25 West Devon, 8s. 6d.
25 Frontino, £2 5s. 9d.	50 Ost. Owcumbe, 2s.	45 West Phoenix, 10s.
30 Goginan, 12s.	70 Old Shepherds, 10s.	50 West Caradon, £1 5s.
25 Gold Coast, 25s.	50 Organos, £2 1/2.	50 West Crebor, 10s.
25 Grogwinlon, 20s.	10 do 15 p.c. Debs., £5 paid, £4 1/2.	50 West Polbrean, 10s.
60 Gawn, 10s.	50 Orita, 25s.	20 Wheel Orebor, £2 16 3
10 Gunnis (Clit.), £3 10s	25 Polrose, 6s.	25 Wheel Jane, 15s.
25 Hingston Down, 12s. 6	25 Penhalla, 10s.	25 Wheel Jewell, 10s.
50 Hoover Hill, 3s.	50 Port Phillip, 3s.	50 Wheel Kitty, £1 12
50 Herodsfoot, 5s.	50 Potosi, 8s. 9d.	40 Wynad Persever., 7s.
30 Indian Consol., 8s. 3d		

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

SPECIAL BUSINESS AT CLOSE PRICES in all Market TIN, COPPER and LEAD SHARES.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN AND CANADIAN STOCKS AND SHARES—SPECIAL BUSINESS.

Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS, SINGLE OR DOUBLE, dealt in at close market prices.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

INDIAN GOLD MINES.—SPECIAL BUSINESS in:—

Devala Moyer.	Indian Phoenix.	Rhodes Reef.
Devala Central.	Indian Kingston.	South-East Wynad.
Indian Consolidated.	Indian Trevelyan.	Tambracherry.
Indian Glenrock.	Mysore.	Wynad Perseverance.

At close market prices, free of commission.

Reliable information given on any of the above. A daily price list issued giving closing quotations. SPECIAL BUSINESS in California, La Plata, Rio Tinto, Frontino and Bolivia, Potosi, Chile, Nouveau Monde, Ruby, Richmond.

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Jablochhoff.	Midland Brush.	Hammond.
Devon and Cornwall.	Metropolitan Brush.	Gulcher.
Shares sold for cash, account, or for forward delivery (one, two, or three months) on deposit of 20 per cent.		Sellon's.

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TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement

A List of Investments free on application.

Mr. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

50 Almada, 13s. 6d.	50 Port Phillip, 2s. 6d.	150 Potosi, 9s. 6d.
25 Bratsberg, 42s.	50 1/2.	35 Prince of Wales.
30 Bedford United, 30s. 6	100 Indian Trevelyan, 6s. 6d.	50 Panulillo, £6 11s. 3d.
100 Californian Gold.	50 9d.	70 Pen-y-Osred, 20s.
10 Carn Brea, 48s.	100 Indian Consolidated, 5s.	80 Ruby, 22s. 6d.
100 Carnarvon Cop. 7s. 6d.	50 9d.	20 Richmond, £7 11s. 3d.
5 Cook's Kitchen.	75 Indian Phoenix, 16s. 3	100 Sortridge, 6s.
70 Chile Gold, 15s. 6d.	100 Indian Glenrock, 13s. 6d.	50 Tankerville, 6s. 3d.
20 Coplaco, £4, x. d.	13s. 9d.	100 Tregembo.
100 Callao Bis, 8s. 6d.	50 Kapanga, 17s. 9d.	75 Tambracherry.
3 Cape Copper.	15 Killifreth, £3 1/4.	15 Van, £5 1/4.
75 Columbian Hydraulic	75 Langford, 10s.	20 Wheel Peavor, £4 1/2.
40 Drakewall, 11s. 6d.	100 La Plata, 32s. 6d.	100 West Polbrean, 10s. 6d.
50 Devala Central, 10s.	100 Leadhills, £3 1/4.	50 West Wheal Peavor, 10s.
70 Devala Moyer, 13s. 6d	100 Monte Bay, 5s.	50 West Wheal Peavor, 10s.
50 Don Pedro, 3s. 9d.	50 Marke Valley, 12s.	10 W. Kitty, £13.
100 Devon Great United.	100 Nouveau Monde, 7s.	100 West Caradon.
6s. 6d.	40 New Kitty, £2 10s.	50 New Wheal Peavor, 10s.
15 Devon Cons., 45 1/2.	100 New West Caradon, 6s. 6d.	100 1/2.
50 East Wheel Rose.	11s.	100 1/2.
50 East Blue Hills, 9s.	50 North Blue Hills, 2s. 6	100 1/2.
25 East Caradon, 35s.	50 No. Trumpet Cons., 10s.	100 1/2.
20 Frontino, £2 10s. x. d.	17s. 6d.	100 1/2.
100 Goodveere.	50 Organos, £2 1/2.	25 Wheel Orebor, £2 15s.
50 Gold Coast, 25s.	50 Orita, 25s.	25 Wheel Kitty, £2.
50 Gawn Copper, 8s. 9d	100 Old Shepherds.	50 West Crebor.

Where prices are not inserted, offers may be made.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal

Investors and others will do well just now to turn their attention to

shares in SOUND DIVIDEND and PROGRESSIVE MINES, many of which

may be bought at very low prices, and are likely to improve considerably in

value within the next few months.

The present is a very favourable opportunity for securing CHEAP SHARES.

Mr. BUMPUS devotes special attention to these Securities, and is in a position

to afford reliable information and advice to intending investors and others.

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ESTABLISHED 1867.

MR. W. B. COBB, STOCK AND SHARE DEALER,

29, BISHOPSGATE-STREET WITHIN, E.C.

BANKERS: ALLIANCE BANK

BRITISH AND FOREIGN MINING OFFICES.

Messrs. PETER WATSON AND CO.,

18, AUSTIN FRIARS,

OLD BROAD STREET, LONDON, E.C.

BANKERS: THE ALLIANCE BANK (Limited).

Messrs. PETER WATSON AND CO.'S

BRITISH AND FOREIGN MONTHLY MINING NEWS

—STOCK AND SHARE INVESTMENT NOTES—MINES,

MINERALS, AND METAL MARKETS—SHARE LIST.

No. 848, Vol. XVII., for DECEMBER month, is now ready,

and will be sent to customers on application.

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Messrs. PETER WATSON AND CO.,

18, AUSTIN FRIARS, E.C.

ROMAN GRAVELS.

TANKVILLE GREAT CONSOLS.

LEADHILLS.

DEVON GREAT CONSOLS.

DEVON GREAT UNITED.

SOUTH DEVON UNITED.

Shareholders in any of the above-named companies, desirous of DISPOSING

of their SHARES may obtain the full market prices on application to—

Messrs. PETER WATSON AND CO.,

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MR. ALFRED E. COOKE,

DEALER in BRITISH AND FOREIGN STOCKS AND SHARES

OF EVERY DESCRIPTION.

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Mr. ALFRED E. COOKE can sell the following lots (or any smaller

number of shares) to immediate applicants at prices annexed, free of

commission:—

Where prices are not inserted, the market price of the day will be

taken, or offers may be made:—

50 Devon Friend., 6s.	100 North Blue Hills, 2s. 6	15 Richmond Silver, 7 1/2
40 Don Pedro Gold, 3s. 6	50 Old Shepherds Lead.	20 Ruby, £1 1/4.
60 East Rose Lead.	50 Organos, £2 1/2.	20 South-East Wynad
50 E. Blue Hills Tin, 8s. 9	50 Orita Gold, 24s.	Gold, 18s. 9d.
20 East Caradon Copper.	50 North Grogwinlon	60 Sortridge Copper and
20 Frongoch Lead, £1 1/2.	Lead, 20s.	Tin, 5s.
30 Goginan Lead, 18s. 9d	100 Parys Copper, 6s. 9d.	45 Tanker. Gt. Con., 5s. 9
30 Herodsfoot, 4s. 6d.	20 Prince of Wales Cop., 13s.	100 Tresavean Gold &
20 La Plata Lead.		Tin, 5s.
25 Leadhills, £3 1/4.		

Many of the above shares can be sold for settlement by arrangement at the

middle or end of January account on payment of 20 per cent. deposit. Shares

not found in the above list may be purchased on application.

In order to save UNNECESSARY CORRESPONDENCE, it is particularly

requested that BUYERS of SHARES in the above list, to which prices are not

attached, will make definite offers when applying for them. SELLERS of

SHARES are also invited in all cases to name the very lowest price at which they

desire to sell.

East Wheel Rose. New Caradon. Bratsberg.

Prince of Wales. Langford. Nouveau Monde.

Mounts Bay. Goginan. Organos.

Devon Friendship. Sortridge. Indian Mines.

Tresavean. Columbian Hydraulic. Old Shepherds.

SPECIAL BUSINESS in the above, as BUYER or SELLER, at closest market

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TELEGRAMS and LETTERS receive immediate attention. All shares cur-

rently dealt in, bought and sold, free of commission.

SPECULATIVE ACCOUNTS OPENED IN RAILWAYS, FOREIGN AND AM-

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tinuously throughout the day by TELEGRAPH from the STOCK EXCHANGE.

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ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

(Opposite the Stock Exchange, with which the office is in DIRECT

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THE INVESTORS' GAZETTE.—NEW NUMBER NEXT

FRIDAY. Will be forwarded to BOX FIVE investors post free on the

understanding that any business resulting from its perusal will be transacted

with Mr. A. E. COOKE, by whom it is published.

ALFRED E. COOKE, 9, OLD BROAD STREET, LONDON.

Messrs. ENDEAN AND CO., STOCK AND SHARE

DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

ESTABLISHED 1861.

Bankers: London and Westminster, Lothbury, E.C.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET

WITHIN, E.C.

Deals in all descriptions of STOCKS and SHARES at close market prices.

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Selected List of Investments post free on application.

MR. ALEXANDER DAVIDSON,

STOCK AND SHARE DEALER,

LEADENHALL HOUSE, 101, LEADENHALL STREET, LONDON, E.C.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,

29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years).

Can sell the following SHARES at prices annexed:—

25 Almada, 13s. 6d.	25 Grogwinlon, 20s.	70 Prince of Wales, 13s.
25 Bedford Unit., £1 16 3	25 1/2.	50 Parys Copper, 7s.
30 Bratsberg Copper, £2.	60 Herodsfoot, 4s. 6d.	25 Panulillo, £6 11s. 3d.
25 1/2.	30 Hoover Hills, 3s. 9d.	100 Richmond, £7 11s. 3d.
65 Californian Gold, 21s.	50 Kapanga, 17s. 9d.	30 Ruby, £1 1/4.
100 Colombian Gold.	30 Kit Hill, 9s.	40 South Devon, 15s.
40 Corporation of South	20 Leadhills, £3 1/4.	60 Sortridge Con., 5s. 6d.
Australian Copper,	20 Langford Silver, 10s. 6	50 Tankerville, 6s. 3d.
21s. 3d.	30 Mona Consols, 22s.	50 Tresavean, 10s.
25 Callao Bis, 8s. 6d.	40 Mounts Bay, 15s.	25 Tollima B.
50 Dev. Friendship, 6s. 3	25 Marke Valley, 10s.	75 Tollima B.
50 Don Pedro, 3s. 9d.	25 No. Blue Hills, 2s. 6d.	50 West Crebor, 10s. 6d.
40 East Blue Hills, 9s.	40 Nouveau Monde, 6s. 6	50 West Lisburne, 13s.
40 East Rose, £1 10s.	40 New W. Caradon, 10s. 6	50 West Devon, 8s.
25 East Caradon, £1 11 3	25 New Quebrada, £1 12 6	50 West Caradon, 25s.
40 Eberhard, 8s. 9d.	30 Organos Gold, £2 12 6	50 Wheel Orebor, £2 15s.
40 Frontino, £2 10s.	25 Old Shepherds, 27s. 6	40 Western Andes Gold.
	50 Orita, fully pd., £1 5s.	

MONA CONSOLS.—A good discovery reported in this mine. A limited

number of shares can be dealt in.

COLOMBIAN GOLD.—Having an extensive business in these shares both as a

Buyer and Seller, investors would best consult their interest by applying to

Mr. Marlborough if they desire to do business in them.

Shares in Home, Foreign, and Colonial mines, bought and sold at net market

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cent.

SPECIAL BUSINESS in TAMAR SILVER-LEAD either as Buyer or Seller.

BANKERS: ALLIANCE BANK (Limited).

THE

"DIFFERENTIAL"

PUMPING ENGINE.

(DAVEY'S PATENT).

FOR

DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,

SUPPLYING DOCKS, PUMPING SEWAGE, AND GENERAL

PUMPING PURPOSES.

HATHORN, DAVEY, AND CO.

LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all

sizes,

The Mulberry Tin Works (Limited).

TEN PER CENT. DIVIDENDS.

WORKS IN FULL AND PROFITABLE OPERATION.

OPEN QUARRY. NO SPECULATIVE MINING.

TIN DEPOSIT PRACTICALLY INEXHAUSTIBLE.

(See Report by CAPTAIN JOSIAH THOMAS.)

Dividends payable quarterly—September dividend paid at the rate of 10 per cent.

APPLICATIONS WILL BE RECEIVED AT PAR FOR 14,494 SHARES OF £1 EACH

(BEING THE BALANCE OF AN ISSUE OF 50,000 SHARES),

Payable 2s. 6d. per share on application, 7s. 6d. per share on allotment, 10s. per share three months after allotment.

Applications for shares may be made to Messrs. BAIN, FIELD, HITCHINS, and CO., Bankers, Redruth, or to the Secretary at the Company's Offices, 11, Clement's Lane, Lombard Street, London, E.C., from whom Prospectuses, Reports, &c., with all information may be obtained.

Meetings of Public Companies.

DON PEDRO MINING COMPANY.

A special general meeting of shareholders was held at the Cannon-street Hotel, on Thursday, Mr. RYAN in the chair.

Mr. DAWSON (the managing director) having read the notice calling the meeting.

The CHAIRMAN expressed his regret that neither of his colleagues, Gen. Downing nor Col. Weller, were able to be present owing to ill-health. The managing director would read letters he had received from them.

The letters were then read as follows:—

DEAR DAWSON,—It is with much regret I am obliged to ask of you to make my apologies to the meeting to-morrow for not being present. I have been laid up with a severe cold, and my medical adviser will not hear of my going out. It appears to me that there is, I may say, but little in Capt. Kitto's report that we did not know long ago. When Captain Treloar retired from the management of the mines he left his own son-in-law, Mr. Symons, to carry out his views of drainage, and the great wheel was inaugurated by them. As matters did not progress satisfactorily, manager after manager was changed. Every effort, as you know, was made by the directors to get "the right man in the right place," but in vain. You personally visited the mine and brought away valuable information to the board. Still it was impossible to recover the state of things into which everything at the mines had fallen—sinking had been neglected for the sake of large dividends, adits undriven for want of funds, the great wheel failed to drain the increase of water, and finally broke down. This is a summary of the failures during our exertions to recover the paying position of the Don Pedro Gold Company, and I trust may be of service to those who may be now required to resuscitate the progress of the company. I would regret much more my inability to attend the meeting did I not feel confident that you are equal to the occasion in giving any information that may be required by the shareholders in assisting to guide them in the decision they may arrive at. Kindly read this to the meeting.

D. DOWNING.

DEAR DAWSON,—I fully intended to be present at our board meeting on Thursday at 12 o'clock, and especially at the extraordinary general meeting, which is to follow at two; but I have been so poorly since I saw you that I do not feel equal to the effort. It is, however, a great satisfaction to me to observe from the report sent in by the investigation committee, that their views as to the general value of the Don Pedro Mine, as well as to desirability of reconstruction and working, are in accord with the present board, and I feel hopeful that there will be no serious opposition shown at the general meeting on Thursday. In carrying out the views of the committee. Assuming, therefore, that reconstruction will be carried, I am disposed to accept the proposition offered of shares in the new company on those I hold at present (original, new, and debentures) and to take an equal number of the new stock. Of course, I do not bind myself to this until I am fully informed of the course and result of Thursday's proceedings, and I would feel greatly obliged if you will state to me shortly on your return to the office, or on the following day how matters have come off.

T. M. WILKES.

The CHAIRMAN: These letters sufficiently explain the reason why I unfortunately am in the chair to-day. A little thought when I joined the board of this company a few years ago that a few years after I should have had to preside at a meeting at which the question of liquidation should be seriously discussed. Our object here to-day is not to go into the past, present, or even future of the company, and it would serve no good purpose if I were to go into its financial condition, or any of the probabilities that may exist now. I may say summarily that, excepting the debt to Capt. Bawden, which amounts to £5000, with interest thereon, we have no liabilities that we know of at the mine up to the present date. Mr. Henrichsen has borrowed from him that sum on interest, which is due in about three equal proportions, amounting to £3000, with interest. The first proportion falls due on June 30, 1883; the next on June 30, 1884; and the final instalment on June 30, 1885, with this condition that if we do not pay off the first instalment when due on June 30 next we are liable to be called upon to pay off the whole; otherwise the property is so far safe for the present. As regards this country, we are under no liabilities and we have a few hundred pounds at the present time, which, however, will be fully exhausted in carrying out the liquidation. As to the mine itself, you all know that underground operations have been stopped for a long time, and we have been going on from hand to mouth at surface. To our surprise we are told that the output for the last month gave 750 ounces, which represents 3000, and that we think ought to cover the expenses, because a great many of the staff have already been dismissed, and the manager is under strict injunction to keep the cost below the produce. Therefore, we have no possibility of any further liability accruing there. In the meantime, of course, the great difficulty is want of capital, we are simply starved without it. We have tried according to our lights to raise capital in different ways, and only partially succeeded. In fact I may reverse it, and say we have rather failed. At the same time we have kept the thing going up to the present time. But if it had not been for the surface explorations we could not have done so. We have had from surface explorations alone 10,000 ozs. That shows we have something there. They had been able to keep the mine partly going without increasing the liabilities. After a careful enquiry by the Committee of Investigation, they having had put before them all the documentary evidence, and furnished with every possible facility by our managing director, Mr. Dawson, presented to you a report. Mr. Dawson has been most anxious that they should have every opportunity of knowing about the company, its past management and present position, and after a most careful enquiry on their part they had drawn up the report which you have in your hands, accompanied by one from Mr. Kitto, whom I do not know, but who is known to Mr. Dawson. His report is most favourable, and he is stated to be a man of considerable experience, energy, and activity. If only half of what he says can be relied upon, we shall be all justified in trying reconstruction with a proper amount of capital. The capital the directors had in mind was not so large as that proposed by the Committee of Investigation. If the scheme the committee had proposed should meet the sanction of the shareholders, it is not for the directors to propose a counter scheme. We thought it our duty to put their report before you as quickly as possible, and it is probable that one of their number will address you in further elucidation of their proceedings at this meeting. We fully agree as to the need of reconstruction, but the committee seem to recommend that the shareholders should receive an allotment in the new company in the ratio of one new share for four without any further liability attaching to them. It struck me, and also Mr. Dawson, at once that that was not the best way to induce the shareholders to find fresh capital. I am afraid many might be tempted to say "I have lost enough, and I am not disposed to go into a new company. I shall take my proportion of old shares and remain passive." We thought that the new interest should be conditional on their paying a certain subscription.

A SHAREHOLDER: When was the £5000, advanced to the company?—The CHAIRMAN: About a year ago, and under the circumstances fully detailed at the last meeting. We have every reason to think that Capt. Bawden, who was the original and sole vendor to the company, and who lives out there, is friendly to the company.

Mr. HENRY TOLPITT: My colleagues on the committee of investigation have asked me to respond to the wish of the Chairman, and on their behalf address a few words to the present meeting. I was put upon this committee at the last meeting without my knowledge and without my consent; but having been named, I felt I could not refuse to act in the matter. The committee have given this concern all possible attention, and Mr. Dawson, as the Chairman has stated, afforded them all the facilities he could in our enquiry. He gave me a very complete set of reports from the commencement of the company, which we have gone carefully through and submitted to Mr. Kitto. Mr. Kitto, at my suggestion, was invited by Mr. Dawson to attend this meeting. This morning, however, I received the following note from him:—

"Dear Sir,—I received a note from Mr. Dawson kindly inviting me to attend the meeting; but as your honourable committee informed me that it was not necessary for me to attend (my colleagues will bear me out in stating that it was his wish that he should attend, for we expected him to do so), I cannot afford to

attend any meeting out of mere curiosity. If you wish the Don Pedro to be made an unqualified success I can do it, although my position will not allow me to take the local management." (Laughter.) The origin of our interview with Mr. Kitto was a communication Mr. Atkey made to the editor of a mining paper, and in the result he invited Mr. Kitto to meet us. We were all struck with Mr. Kitto's local knowledge of the Brazil, and his views appeared to be in the main sound. I referred those views to another eminent mining engineer, who generally agreed with them, and who, as soon as he saw the plans and the inclined planes, said—"Heaven bless my soul, they ought to be the other way up." (Laughter.) So far as our knowledge goes we are disposed to believe his views to be correct as to the way the mine ought, and might still, be worked. Mr. Dawson favoured us with all the latest reports, and my recollection of them is that they are unanimous in expressing their belief that the mine is still very rich. It would be as rich as formerly, but the gold has not been taken out properly. It is perfectly absurd to suppose you can draw a line along a mountain and say of one side, "there the gold commences," and of the other, "at this point it does not go any further." With regard to reconstruction, and the remark of the Chairman, that was a point which occurred to us, and which we discussed very fully. Mr. Hill, one of the committee, and a gentleman of legal experience, guided us mainly on the matter, and we understood from him that we could not make it a condition with the old shareholders, that we could not compel them to take an interest in the new company unless they chose to do so. On that point we were guided by him. Whether the solicitor of the company thinks differently I am not prepared to say. I am not a legal man myself, and I do not profess for a moment to give an opinion on the matter, but merely state the reasons that guided us in our action. With regard to any possible scheme of reconstruction, we felt that it was perfectly useless going on as we are doing now. This mine will clearly fall into the hands of the original vendor, who has a mortgage on it for £5000. If we do not take decisive action, and it seems absurd that body of gentlemen in England representing capital and intelligence should allow this property to be sacrificed for the sake of such a sum. But we felt it was useless doing anything by halves, and that we should make up our minds to open up the mine in the way we were advised. I know no mining engineer can see inside a mountain, but it is, unfortunately, the opinion of many shareholders in these companies that he can do so. I assure you he cannot, any more than we can. He can only be guided by his experience, and upon his skill and knowledge the success of everything in mining they were all agreed. With regard to the suggestion that the present committee should continue their labours as a committee of supervision—that was merely a voluntary effort. We were ready to give any aid we could. We suggested that Mr. Atkey should be appointed liquidator, in conjunction with Mr. Dawson, mainly because he took more trouble than any one else; and we also felt it was due to Mr. Dawson that he should be requested to act as liquidator, not only because of his knowledge of the company, but because it would facilitate in every way the plan of reconstruction. As to the directors, we could not see that they were responsible for the failure of their predecessors, and we said so. Our last suggestion is merely a formal one, that the expenses should be kept as low as possible, and that if any scheme of reconstruction is to be carried out, it should be conducted with perfect good faith and good will, on the part of both shareholders and directors. We should say, let bygones be bygones; put a sponge over the past, and start afresh as well as you can. (Cheers.) Mr. WILKES thought a greater inducement should be given to the old shareholders to come in. He asked whether any difficulty would be found in liquidating the company so far as Brazil was concerned. Mr. DAWSON said he did not believe there would be the slightest difficulty or any great expense.

Mr. BOYDELL said he thought the mine in depth had a chance of success, and urged the shareholders not to let it slip out of their hands.

A long and desultory discussion on legal points ensued, which was interrupted by Mr. FRASER RAE, who reminded the meeting that there was no resolution before it.

The CHAIRMAN then proposed—"That the report of the committee be hereby received and adopted."

Mr. WILKES asked whether it would bind the meeting as to details?—The CHAIRMAN: No.

Mr. FRASER RAE seconded the motion, which was unanimously carried.

The CHAIRMAN next proposed—"That it has been proved to the satisfaction of the company that it cannot by reason of its liabilities continue its business, and that it is advisable to wind up the same voluntarily."—Mr. JAMES ATKEY seconded the resolution, which was carried unanimously.

Mr. WILKES thought there were two courses open to the shareholders to follow. One was to wind up the company, pay all the expenses in Brazil which a new company had to pay if there was a tax on the capital and purchase money, &c.; or, on the other hand, there was the power to increase their capital by the issue of new shares on certain terms, and that brought them very much to the same position.

The CHAIRMAN said the committee were of opinion that nothing short of a new company would do anything effectual to bring matters to a satisfactory issue.—Mr. DAWSON: Just so; because the Articles of Association are such that you cannot issue capital but on certain conditions.

The CHAIRMAN then moved "That the company be wound up accordingly."

Mr. HILL seconded the motion, which was carried unanimously.

The CHAIRMAN moved "That Mr. Albert James Atkey and Mr. John Edward Dawson be appointed liquidators of the company."

Mr. FRASER RAE thought that in a matter of this kind, which was very important, they ought to appoint three liquidators. (Hear, hear.) The liquidation of most companies was generally conducted for the benefit of the lawyers, because it was simply a question of winding up and distributing assets where there were any. In the case they were not going to wind up—they were going to have a fresh lease of life under other conditions, and in these circumstances it was of great importance that in the liquidation every effort should be made to continue the company on a new and, it might be, on an improved footing. He did not think, therefore, they ought to ask two gentlemen to take on the responsibility without someone being added to their number to lighten their labours; and for that reason, and being well acquainted with him, he begged to propose that the name of Mr. Boydell be added to the resolution as a third liquidator.

Mr. HILL had no objection to Mr. Boydell's name being added, but he thought that the expenses that must grow out of such an arrangement would become very heavy.

A SHAREHOLDER supported Mr. RAE's suggestion.

Mr. DAWSON said that if the shareholders thought that three liquidators were unnecessary he should be very pleased to have his name withdrawn in favour of that of Mr. Boydell, at the same time if they considered that his knowledge would be of any special assistance to the shareholders he would regard it not only as his duty, but a pleasure to serve as one of the liquidators.

The CHAIRMAN thought it was very essential that Mr. Dawson should be one of the liquidators, a view in which Mr. HILL said he most emphatically concurred. After some further discussion it was agreed that Messrs. Atkey, Dawson, and Boydell should act as liquidators.

The CHAIRMAN said that there was still one subject in this connection unsettled, and that was the question of the remuneration to be given to the liquidators. That could either be determined on at the present or at some future meeting.

Mr. WILKES suggested that the question should be left over till a subsequent meeting.—The SOLICITOR thought that would be the better course, as the work would be practically done, and it would therefore be easier, having regard to what that work had been to come to a satisfactory conclusion as to what would be a suitable remuneration.

The CHAIRMAN moved that the remuneration be fixed by the shareholders at the next general meeting.—Mr. FRASER RAE seconded the motion.

Mr. FRASER RAE proposed "that 100 guineas be divided amongst the liquidators as they see fit."—Mr. RANSFORD seconded the motion.

A SHAREHOLDER thought this amount was entirely out of the question. They could not expect three gentlemen to give the time and labour which would be exacted from them by the liquidation for so small a sum as 100 guineas. He did not think they would get three liquidators to act in a matter of this kind for 100 guineas, and, he, therefore, thought it would be better to leave the question open till another meeting, when they would be better able to deal with it.

Another SHAREHOLDER agreed with the last speaker in all he said.

The SOLICITOR said that as far as his experience went in the case of a company in the position of the present one it was far more usual to leave the question of remuneration to the future time than to vote an absolute sum of money at once.

Mr. FRASER RAE wished to add that the shareholders of this company were not ungenerous, and if the liquidators' duties proved to be onerous he did not think anyone would object to vote an extra amount.

A short discussion ensued, at the end of which the CHAIRMAN put it to the meeting to say whether the amount of the remuneration should be fixed at once or deferred till a subsequent meeting, with the result that 11 voted in favour of each proposal. The Chairman, however, having the casting vote gave it in favour of deferring the matter till a subsequent meeting.

Mr. HILL suggested, as an amendment, that the question should be at once decided by making the remuneration 150 guineas, to be divided amongst them as they saw fit.—Mr. WAGSTAFF seconded the amendment, which was finally carried without a dissentient.

The CHAIRMAN next moved "That it is desirable that the voluntary liquidation of the company should be carried out under the supervision of the High Court of Justice."—Mr. WILKES: No; that would add great expense.

The SOLICITOR pointed out that this did not necessitate the liquidation being carried out under the supervision of the Court, but simply provided for future contingencies; as, for example, if at some future time it was resolved to apply to the Court for a compulsory winding-up, and this resolution was not passed, it would probably involve the calling of a meeting to ascertain what the views of the shareholders would be for the winding-up under supervision as distinguished from the voluntary winding-up.

The CHAIRMAN pointed out that in other words it meant that this meeting thought it was desirable that the supervision should be under the Court supervision in circumstances rendered it necessary.—The motion was then agreed to.

A long discussion followed as to the details of the reconstruction scheme. Finally Mr. WILKES proposed, "That the holders of shares, No. 1 to 100,000, receive 25 per cent. of the nominal value of their holding in shares of the new company, or in lieu thereof any shareholder may take a number of shares equal to his holding with the sum of 10s. per share credited as paid thereon, leaving him a liability of 10s. a share." The motion was carried, and a vote of thanks having been passed to the Chairman the proceedings terminated.

VICTORIA DIAMOND MINING COMPANY OF DE BEER.

The ordinary general meeting of shareholders was held at the offices, Finsbury Circus, on Wednesday.

Mr. C. J. POSNO in the chair.

Mr. CHARLES DAVIS (the secretary) read the notice calling the meeting. The report of the directors was taken as read.

The CHAIRMAN said that, in submitting the report for their adoption, he considered that it stated as much as the shareholders could desire to know, but at the same time any questions that they might desire to ask him he would be happy to answer. The expenditure, it would be noticed, had considerably exceeded the amount of share capital subscribed, but he believed that the report showed pretty fully all that had been done for that amount. They had obtained good results; for, though they had laid out a great deal of money, they had obtained the knowledge that they possessed a very valuable property. Their manager, Mr. Henrichsen, and Mr. Oates, their engineer, had displayed great energy; but the result obtained was also in a great measure due to the friendly support that had been extended to them by influential shareholders, who had provided them with the means of carrying on the work, without which they would not have been in the position of going down deeper on the property, and thus discovering the rich ground. These shareholders were still desirous of extending further support to the company, provided the other shareholders came forward with their help. The sum already advanced by the gentlemen to whom he had referred was £50,000, and they were now willing to take debenture for the proposed second issue of debentures. It was consequently proposed to raise an additional sum of £50,000, which would not be a very heavy burden on the shareholders. It meant, in fact, the increase of their risk in the company by one-sixth part more than they had at present invested. In effect it means this: the matter was now very much in the hands of the shareholders, the necessity having arisen for his appealing to them to come forward and find the capital required for further and fully developing the company's property, which had been proved to be of great value. Reasonable time would be given to the shareholders who were willing to take up their proportion of the debentures. The £50,000, already subscribed for, would rank as a first mortgage debenture, and the second issue of £50,000, as a second mortgage on the property. Debentures would be issued, secured by a registered mortgage deed. The first £50,000, debentures would bear 8 per cent. interest, and the second 10 per cent. interest. The first were issued to the shareholders who advanced the £50,000, and he understood that they would be prepared to take their proportion of one-sixth of the second issue, provided the other shareholders did the same. Most of the large shareholders had already signified their readiness to the proposed second issue of debentures. Probably it would not be out of place for him to refer to the circumstance that a committee had been formed in London for the better and more economical working of the diamond mining companies in the diamond fields. With regard to this company he had the fullest belief, after what had been stated by Mr. Henrichsen, and long conversations with that gentleman, that if the means were found for doing the required work during the coming year that their efforts would be crowned with success. He had now only to move the adoption of the report and statement of accounts.

This was seconded by a Shareholder and agreed to without discussion.

Mr. HENRICHSEN, the manager of the company, at the intimation of the Chairman, then proceeded to make a statement as to the present position and future prospects of the company, in the course of which he remarked that no doubt the shareholders in looking through the accounts had seen that a certain amount of money had been spent which at present looked a very heavy expenditure, and they might think that it had been an unprofitable expenditure, but he could assure them that such was not the case. In working so many claims on a large area possessed by the company they had to work a large number of lodges at a certain time, and they being obtained from poor ground rather left a loss on the working, but of course it was necessary to take out these lodges in order to work the rich ground, so that the money had not been unprofitably expended. It was a matter of surprise to himself and Mr. Oates that they had not reached the rich ground before, but in their calculations they could be only guided by the experience of their neighbours, and when they found that one company at a depth of 150 ft. were enabled to pay their shareholders a dividend of 22 per cent., another at 200 ft. was working with great success, and another at 150 ft. found rich paying ground, and they were consequently led to suppose that at 150 ft. they would also meet the rich ground, he felt that it was his duty to find something definite, and consequently he made a trial shaft for the purpose of obtaining a sample of ground at a greater depth and testing it, and the result was that it assayed 15s. per load, as compared with 4s. per load, from the poorer ground, and there is every reason to suppose that as they go deeper they would get from 21s. to 25s. per load, which would be rich ground.

He had every confidence in the future success of the company, and believed that in a few months they would not only pay their way, but be working at a profit.

On the motion for the re-election of the directors, who all retired on this occasion, Mr. MACDONALD declined to act, stating that his time was too much occupied, and that they had a strong board without him, but some doubt being felt as to the filling up of the vacancy on this occasion at this meeting, Mr. MacDonald consented to retain office until another gentleman was appointed to the position; the whole of the directors were consequently re-elected. Mr. W. L. Clifton Brown, the retiring auditor, was re-elected at the same remuneration as before.

A vote of thanks to the Chairman and directors closed the meeting.

THE AKANKOO (GOLD COAST) MINING COMPANY.

The third ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Thursday.

Mr. GEORGE CAYENDISH TAYLOR in the chair.

The report of the directors having been taken as read,

The CHAIRMAN said that several shareholders had asked why they went to the expense of sending Mr. Lane out and bringing him back, and why he did not remain there. Well, the directors considered it highly desirable that Mr. Lane should go out, should see the locality, should see the requirements of the locality, and make himself thereby acquainted with them; that he should then come home and report to the directors in person what possibly could not be done by correspondence, and that also he should be present here in the flesh before the shareholders, that they might ask him any questions that they desired to put. Furthermore, Mr. Lane had to look after the machinery, he had also to look after the stores, and see that everything was shipped out to the Coast that could possibly be required. Well, Mr. Lane was present, and all that he (the Chairman) could say was that any small expense incurred by his coming home and going out again was far more than counterbalanced by the advantages of such a proceeding. He could only hope that they had all carefully read the report of Mr. Lane, because it would guide them in any questions they might wish to ask, and would probably save them from travelling over the same ground twice. Mr. Lane would explain his own report, and, therefore, he (the Chairman) would not make any comment on it. As to the machinery, they were told that it was made by Messrs. Appleby. It was now erected. The directors saw it yesterday and saw it in working order, and any shareholder who wished to see it he had no doubt could do so, and Messrs. Appleby would be glad to show it, but they must go down as soon as possible, because it was intended to take the machinery down on Monday, so as to be ready to send it out as soon as possible, and the ship could be secured. He might say that the machinery had 20 stamps, but the number of stamps could be increased at any time at a very small additional cost. They did not think it advisable for all to go to the expense of sending out more than 20 stamps. Of course, he was not an expert in machinery, but he was informed that it was the very best type of machinery, and that it was admirably suited for the work for which it was intended and for the locality. Mr. Lane would follow as soon as the necessary machinery and stores were sent off. The machinery and stores would all go in a sailing ship; Mr. Lane would follow in a steamer, and would arrive there before the machinery, and have everything ready for its erection as soon as possible afterwards. They were extremely fortunate in getting out all their stores and plant so far without any drawback whatever. The matter of getting out the launch was a great piece of luck; he must confess he was very nervous about it, as there were so many difficulties to be contended with. Referring to the accounts, it would be seen that they were for nine months, which he wished them to bear in mind to guide them in any questions they would wish to ask. The calls in arrears were stated at £2584, but that amount had been very much reduced—in fact, to about £238, or something of that kind. One of the great difficulties they had to contend with was the getting in of the calls. In most mining companies with which he was connected he knew from his own experience they called up all the capital at once, and it had been a great assistance to them, because they had been able to place the money and make use of the money, and get interest on it, whereas in this company they had not called up the money until it was wanted, and very often they had had a great difficulty in getting in the money of the calls. Many of the shareholders had paid freely, and at once, but some had, but some had hung back, and it had been hard work to deal with them, and to get them to pay. Whenever a shareholder had asked for indulgence, stating that he was unable to pay, time had been granted to him. Some shareholders had written most improper aspersions on the directors as to what they were doing with the money, and he did not think that it was a justifiable proceeding. It was not fair to shareholders who did pay their calls that others should be allowed to remain in arrears. (Hear, hear.) He thought they would admit the justice of that. There were some gold mining companies, which he need not name, which had entirely gone to the bad because they had been unable to get in their calls. He hoped they would not be in that position—in fact, he was sure they would not. In the accounts there were several items lumped up, and, of course, it would be impossible to give the details, but any shareholder could have them who liked. With regard to the directors' fees, the item of 7000, included a period of nine months. At the last meeting the directors agreed to make a reduction in their fees, and they had done so to the extent of 25 per cent., carrying over the balance to a suspense account. Comparing their fees and administration expenses with those of other companies, he thought he could show that this company was very cheaply worked. It must be remembered that in Californian mines there was a very large and expensive agency over there, but they had no agency of the kind, as everything was done in London. They had never paid anything for promotion money, or anything of the kind, any more than what had appeared in their former accounts. For three months they worked the company with three directors, but as I formed a quorum it was found necessary to increase the number in case of the absence of any. He would not like to take upon himself the responsibility of deciding important questions of policy with so few as three. They had now four directors, which was one less than the maximum number allowed by the Articles of Association. In conclusion, the Chairman moved that the report and statement of accounts be received and adopted.

Col. ARBUTHNOT seconded the motion, and said that with regard to the machinery it left nothing to be desired.

Mr. KIBBY asked why the balance of directors' fees was put to a suspense account? He also asked an explanation with regard to the retention account?

The CHAIRMAN: That no longer exists.

Mr. FREEMAN suggested that it would be well to make further calls, so that the company would have plenty of capital.

Mr. CROFT asked if some more economical mode would be adopted with regard to the money spent in London, and also whether the samples taken by Mr. Lane at random had been sampled?

The CHAIRMAN, replying to questions, said that as to the suspense account, it was understood at the last meeting that the directors would make a reduction in their fees, and they had done so, and it was also stated that if the company was in a prosperous state of course there would be no difficulty whatever in handing over to the directors their full fees according to the Articles of Association. With that understanding the balance which was not taken by the directors, had been carried to a suspense account, and he might say for himself and colleagues the directors were not likely to ask for the money until the whole concern was in a thoroughly paying and prosperous condition, and well able to pay it. As to the calls, he confessed he should like himself very much if they could call up the whole capital, because if they had money in the bank they would get something for it, and need not be under the painful necessity of suing some of the shareholders to make them pay. He would like to see the directors make calls in February, and if the shareholders liked they would have no objection to call the whole amount up. (Cries of "No, no.") Hitherto the shareholders had had the advantage of uncalled capital, and had had the use of the money. The directors had never made a call until it was absolutely necessary that they should do so. They had a balance of about £4500, and about £2500, due on calls. As to the management in London, he would like the hon. shareholder to point out where they could economise. He was confident that every economy consistent with efficiency was practised. Many other mines had expensive agencies abroad. In one instance he knew they spent £5000, or £6000, in brokerage; but in this company they had spent nothing in that way. He claimed that this company from beginning to end had been managed in a most economical manner. There were one or two difficulties at starting, but these had been disposed of. Another thing they had to do was to house the miners, and to house them comfortably.

Mr. LANE said that the specimens of ore he brought home he took at random; those that had been assayed, but the washing took place in the presence of the district Commissioner, and saw it the same as he did. It did not strike him at the time there would be any necessity to bring home any rock to assay after the many assays that had been made.

The CHAIRMAN, continuing, said that Capt. Cameron's accounts only came two or three days before the last meeting, and it was impossible to deal with them there. Since then they had been thoroughly gone through by the secretary, and had been audited as far as possible. Of course, it was very difficult, as they had a lot of pay-sheets and black men to get vouchers that would be satisfactory to a London accountant; but he believed they had got the very best that could be obtained on the spot under the circumstances.

Mr. GETTING asked Mr. Lane if the largest of the three reefs was a well-defined reef.—Mr. LANE: Well, it is fairly defined, but I cannot say much more than that there is a considerable outcrop.

Mr. GETTING: You said you considered this to be one of the finest mines in the world, that is your candid opinion from the indications you saw.—Mr. LANE: Yes.

Mr. GETTING: If efficiently worked and economically managed it will develop into one of the best of the most prosperous gold mining properties on the Gold Coast. Is that your opinion?—Mr. LANE: It is.

Mr. GETTING put some further questions, in reply to which Mr. LANE answered generally confirming the favourable nature of his report.

Mr. GETTING thought it would be gratifying to the shareholders to hear the candid opinion of Mr. Lane as to what the mine was likely to be. With reference to calling up the money, they had entered into a contract with each particular shareholder, and there was no possibility of deviating from it. He thought that all the particulars with regard to the property should be sent to the shareholders. In the case of Indian mines notices and reports were constantly sent out, but they were mere fables, and the shareholders might argue *ex uno disce omnes*. He thought it was otherwise, and that the shareholders in this company should not take fright and sacrifice their property. He believed they had the best mine in the market, and had thoroughly enquired into and satisfied himself on the point.

The CHAIRMAN said they had always on receipt of letters from Mr. Lane communicated them to the mining papers, and they had been printed. They had also sent them to the daily papers, but the daily papers would not put them in. With regard to sending circulars to shareholders he might say that to send circulars to 700 shareholders was a very expensive affair. They had done the best they could do with the means at their disposal, and it was intended to send a full report of this meeting to each of the shareholders. With regard to the depression of the shares, if shareholders would go and throw their shares on the market and force sales it was impossible for anyone to keep the prices up. The other day there were some fully-paid up shares sold by auction at 13s.

a share, and when a man could get a fully-paid up share for 13s. it was hardly likely he would pay 12s. 6d. with calls to be made.

Mr. LANE was sure they would be very pleased at the way in which the directors had been able to congratulate them on the present state of things. He explained that soon a tramway would be constructed, when there would be no difficulty in getting materials to and from the mines. There was an abundance of water and an ample supply of timber. The climate was by no means as bad as it had been painted, but of course it was necessary to feed and house their men well.

The report was then adopted, and the retiring directors and auditors having been re-elected, a vote of thanks to the Chairman and directors and manager terminated the proceedings.

BRATSBERG COPPER COMPANY.

The ordinary general meeting of shareholders was held at the offices, Austin Friars, on Thursday.

Mr. J. H. MURCHISON, F.R.G.S. (the Chairman of the company) presiding.

Mr. H. C. MURCHISON (the secretary) read the notice convening the meeting. The reports of the directors and managers, and the statement of accounts, having previously been circulated amongst the shareholders, were taken as read.

The CHAIRMAN said: Gentlemen, the directors regret very much to have omitted in their report any notice of the deaths of two of their late colleagues. Mr. Macfarlane was one of the first and one of the largest shareholders. He took great interest in the proceedings of the company, and also had great confidence in its success. He knew a good deal about these things, and was a man of very acute perception in regard to them. The other, Mr. Briggs, was a well-known public man, at the head of one of the largest colliery and iron-works in Yorkshire, and he was a man who, from his knowledge of machinery and mechanical appliances generally for mining purposes, was, of course, of very great service to this company. He went out to see these mines, and also to perform some very important matters of business connected with this company, and I am sorry to tell you that he died suddenly in Norway, really while he was engaged in the service of this company. We have elected to fill the places at the board thus vacant two gentlemen who have a large interest in the company themselves, and also represent friends considerably interested; and I am sure you will, when the proper time comes, cordially support the election of these two gentlemen. The accounts, as you will have seen, brought up to a very recent period. It is not often in companies of this description, particularly foreign companies, where you can have a meeting, and have accounts presented brought up to within six weeks of that meeting. (Hear, hear.) With regard to the expenditure there was no difficulty about that, and we were able to give it in a definite shape. The expenditure charged in the profit and loss account is given without any estimates whatever. We have charged a portion of the preliminary expenses to the profit and loss account, and it is intended to do so in future years until those preliminary expenses are ultimately discharged altogether. With regard to the other side of the accounts, you will find that the 76851 worth of copper ore has actually been realised. With regard to what is estimated, two cargoes have I may say arrived. The Mary Owen, at all events, has arrived and discharged her cargo, and the Dizzy has been seen off the coast, so there is no doubt about that. I may add that the ore is fully insured, and there can be no doubt about realising its value in any case. Since the reports were issued we have received an intimation that another vessel, the John Evans, is expected every hour at the port of Skien to take away the third cargo, and there is no doubt that that quantity of ore will arrive as early as the end of the month. As the proceeds of the ore sold for the first 12 months. Copper ore has no doubt gone down a little lately, but we are in a position, from the arrangement we have for selling our ores at present, to state pretty accurately what that ore will fetch. Assuming that the quality is anything like what it has been hitherto, we believe the price we have put down will be fully realised. The arrangement we have with one of the first copper smelting firms in this country is this—that the price we get per unit is to be based on the average standard of the Swansea Ticketing held nearest to the date sampled. The last was on Nov. 7, consequently we know what the price was at that time, and we have no doubt noticed the most agreeable fact that the profit has been 36944. 19s. 5d., on the basis of the remaining portion of the ore realising what it is estimated to do. We mention in the report that new machinery is being erected, and that larger returns will be made when this is completed. The directors were under the belief that that machinery would be finished by about the beginning of next summer, but it appears that it will not be ready till about the month of August. Capt. Daw, jun., is here, and he says that it will be about that month before it is at work.

Capt. A. W. DAW: Yes; about August.

The CHAIRMAN: But irrespective of that we shall be able to get larger returns. A great deal of dead work has been done underground and at surface; and the men hitherto employed in this dead work will be able to break ore, and we shall increase the returns quite irrespective of the new machinery. When the new machinery gets to work we shall have considerably larger returns, and for a portion of next year, as you hear, we shall have the new machinery in operation. The machinery is of that character which is capable of carrying the working of the mines the 150 fms. deeper than at present, consequently there is a long period to look forward to, and we shall be able to state so far as regards particulars machinery. With regard to what the different points are valued at, the particulars are given in the reports. You will also have noticed that the managers estimate that there is a much larger amount of ore in reserve. They state that it is much above 100,000. We have reason to believe that it is very much above that. Other practical people who have examined the mine, people in no way connected with Captain Daw, and men of very high ability, have estimated the reserves at a very much larger sum than that. Therefore, at all events, there is a very good basis for us to look forward to getting certain returns for a long time to come. But I think it necessary also to draw your attention to this, that we are working only a very small portion of the property. We have other mines which are considered to be of very great value. In fact the Nesmark Mine, which is near the Hoffnung and Johannes Mines, can be worked with great facility in connection with the present mines we are working, and is one which we hope to be able to tackle ourselves; and I hope that the capital we have—from what I have heard from Captain Daw—will enable us to work the Nesmark Mine. There is every prospect that we shall be able to do so. I may state that the Nesmark Mine has realised about 500,000. It is a mine, so that that would be a very great addition to our present returns if we were able with the present capital to work that mine. With regard to the other mines—Mosam, Guldna, and one or two others—the shareholders will have to consider by-and-by whether something should not be done with them for the benefit of the present shareholders. It is a pity that they should lie idle. When we are at full work with the new machinery it will be a matter for consideration whether they should not be dealt with in some way, either by working them ourselves, or by disposing of them on advantageous terms, of course reserving an important interest to this company in the returns and profits which their working would realise. Another very important point is that of having a steamer of our own. At present we are entirely dependent on a company that possesses two steamers on the Bandagall Lake. We have to carry our ores across that lake a distance of about 35 miles; and we are at present in their hands. But that is not all. For about four months and a half in the year the steamer is laid up, quite irrespective of the weather. It was I think laid up from the middle of December till April.

Captain DAW: At the end of April. It could have run, so far as the weather was concerned, nearly all last winter.

The CHAIRMAN: If we have a steamer of our own we should be quite independent of these steamers, and be able to run it at the times and get home the ores when we cannot now get them conveyed. The steamer would pay very well from the traffic we should get from other sources. The estimate for the steamer is something under 20000, so that we are in hopes that we have got the means to carry out both these objects—that is, the development of the Nesmark Mine, and the purchase of a steamer. The directors' and managers' reports are so full of detail that I have nothing new to tell you; but any questions which any of the shareholders wish to ask will be answered. I now beg to move "That the reports and the accounts now presented be received and adopted." (Cheers.)—Mr. H. W. LAMB seconded the motion.

Mr. LEAR: There is an item for the purchase of land, turbine sites and water-course. I thought the whole of the mines and the land adjoining belonged to the company. It is a small item of 200. 5s. 7d.—Capt. Daw: It is a small piece of land bought at the boundary of the company's property for the water-course.

A SHAREHOLDER asked for an explanation of the item "less deducted for working account."—The CHAIRMAN said that when the iron, coal, oil, and other things which the company had paid for were given out to the men they were charged with them, and the amount was deducted from their wages.

Mr. SLOUS congratulated the directors and the shareholders on the success which the company had achieved up to the present time. (Cheers.) He was a very old mining shareholder, and he would warn the directors to avoid the rocks ahead in connection with the development of the mines. It too frequently happened that hard earned profits were spent in endeavouring to secure prospective advantages. He thought that a certain amount should be taken from the profits of each year for development work, and that there should not be a constant drain caused by prosecuting uncertainties.

In reply to Mr. BERGTHEIL the CHAIRMAN said they had two freehold properties of about 1000 acres each, and a forest which was a leasehold.

Mr. BERGTHEIL: What is the lease for?—Capt. Daw: 25 years, of which about five are expired.

Mr. BERGTHEIL: Is it intended to declare a dividend to-day?—The CHAIRMAN: No; not until the ore is actually realised.

Mr. BERGTHEIL: A 5 per cent. dividend would absorb 30000.

The CHAIRMAN: The dividend would be paid only on about 56,000. It would take 26000, and we should carry over about 10000 of profit afterwards. Besides this we have about 12,000 of working capital.

Mr. BERGTHEIL thought that with the work they had ahead the money would be better in the hands of the directors to expend on the development of the mines. He for one would be quite willing to wait a little while longer for a dividend. Mr. Bergtheil asked how it was that so many of the shares were not paid up in full?

The CHAIRMAN: Some of the shares were not issued till the end of October. The amount is not due yet, as the instalments are payable up till February next.

Mr. MADDOX: There is an item upon the credit side of the accounts of calls of 25000. Are those unpaid calls?

The CHAIRMAN: They are calls chiefly not yet due or in course of payment on the newly-issued shares. The directors do not propose to pay the dividend until nearly 80000 has been received for the ores. The profit will be 36944, and a dividend would come to about 10000, less than that. You see we have paid the cost of raising this ore, and the whole of the money will come back to us.

Mr. MADDOX supported the proposition of the directors that a dividend should be paid as soon as it could be paid prudently, considering the fact of a company being in the Dividend List infinitely improved its position. (Hear, hear.) They had at least 100,000 worth of ore in reserve; they had purchased all the necessary machinery, and they were actually making profits. The directors would, therefore, be fully justified in declaring a dividend. He congratulated

the directors on the satisfactory aspect of the mine, and on the great energy which had been displayed in the development of the property. (Cheers.)

Capt. DAW, in reply to questions, said: I think all the expenses of the steamer would be met by the traffic of the place, irrespective of the carriage of the company's ores, and further that the steamer would be able to ply on the lake at least eight months of the year in all years. I have no doubt that we shall continue to make good returns. I never saw the mines looking better than when I left a fortnight since, and I have been connected with them for ten years. There has been a considerable improvement in the main points. We have at out 300 fms. opened on the course of the lode, all in profitable ground, and when the new machinery is erected we shall be able to increase the returns considerably. I think we shall do a good deal irrespective of the new machinery in the coming year.

Mr. MADDOX: What do you consider would be profitable per fathom?—Capt. DAW: On the average, taking two-thirds of the whole extent of the ground, it is worth about 13s. per fathom, taking 1 ton to the fathom. I think a third of that would be profit, taking it generally throughout the mine.

A SHAREHOLDER: What would be the expense?—Capt. DAW: About 8s. per ton—that is, including freight, and actually delivered at the smelting works at Swansea.

The reports and accounts were then unanimously adopted.

On the motion of Mr. J. MACMILLAN, seconded by Mr. LASKAR, the auditor, Mr. L. M. Berghtheil was re-appointed at a remuneration of 10 guineas per annum.

A cordial vote of thanks having been passed to the Chairman and directors,

The CHAIRMAN acknowledged the compliment, and said: We attend to the business very carefully and attentively. It occupies a great deal of time and thought; but I think that in future years the attention and labour we have given in the past will be still more, and very much more rewarded by the increased prosperity of the company. (Hear, hear.) I am quite sure of this, that we have a very valuable property, and that it is being most carefully and ably worked by the managers of the mines. (Hear, hear.) We have the advantage of having men there who have not to gain their experience, but who have been long resident in Norway. Capt. Daw, sen., has been there 15 years, and his sons have been with him for some years; so that is not like sending strangers who have to learn their lesson before they can work the property. They have learned all that, and we are already reaping the advantage of their experience, and I think that in future we shall have very great cause to be satisfied with the undertaking we are associated with. (Cheers.)

The meeting then closed.

ARIZONA COPPER COMPANY.

The first general meeting of shareholders was held at the Freemasons' Hall, Edinburgh, on Dec. 8.—Sheriff GUTHRIE SMITH presiding. There was a large attendance.

The CHAIRMAN stated that, in terms of the Act of Parliament, they were met within four weeks after the registration of the company, to appoint directors to carry on the business of the undertaking. The directors who started the company had printed the following report of the proceedings down to the present date:—"On Sept. 7 possession of the works was obtained. At that date the large 40-ton smelter was under repair, and only a small one of half the capacity in use. By the beginning of October the large smelter was at work, and the production of copper is now about 33½ tons weekly. Another smelter of 30 tons capacity is being put up at an expense of \$3000, and should be ready for work by the close of this year. Detailed accounts have not been received, but the directors are informed by cable that contracts have recently been made for delivery of 1,000,000 lbs. refined copper at 17 cents per pound, or 701. per ton of 2000 lbs., the standard in use in America. That report, the Chairman continued, had caused some disappointment in some quarters, and had been misunderstood. They had no accounts to present, not even for the first three months of the company, and the directors were not quite sure whether they should or should not issue a report at all. They had, however, given the shareholders a fair narrative of the proceedings, abstaining altogether from indulging in any promises, or enlarging on the position and prospects of the company. They had endeavoured to abstain from speaking in too extravagant terms of the undertaking, although they themselves had entire confidence in it. They had not declared any dividend, as they did not want to commit themselves on that subject without the warrant of Mr. Underwood, the manager of the company in America. Since the report had been printed, however, he had received information from Mr. Underwood, which he thought would be satisfactory to the shareholders. In the course of a statement which the Chairman then made regarding the situation of the works and the prospects of the company, he said that they could walk over the Coronado Mine for about 2 miles—the vein itself, which is several feet wide, being visible under them. It was possible that the vein was some 100 ft. in depth, but they could not say. In that deposit alone there was certainly a mass of rich ore, which would keep them working for probably a generation to come. There was no question as to the abundance of the material—the only question for the shareholders was—How much they were likely to make by it? From the information received from Mr. Underwood he found that the first shipment to Lordsburg was made on Sept. 12, and between that date and Nov. 6 there were shipped to Lordsburg 554, 680 lbs. of copper, which was equal to 277 tons. This quantity was produced with only one smelter working for a part of that time, and at the present time they were erecting a third smelter of larger dimensions than the two they had already working. During the month of September, with only the 20-ton smelter working, they produced about 35 tons of copper per week, while the manager in America expected when the larger smelter was in operation they would produce at the rate of 35½ tons per week, or probably more. He (the Chairman), however, thought, with more experience and a more improved method for carrying on the work they should be equal to a production of about 40 tons per week. Mr. Underwood showed that it might be fairly said that the profit realised was equal to 10000 per week under the present circumstances. At present the on-cost was heavy, but the Chairman said he was informed that when the railway was opened their profits would be increased by at least 6s. per ton. This being the case it would be for the consideration of their directors whether they should not at once begin to pay a dividend. Their desire had been that the dividends should be paid quarterly, and in that view they were in a position to begin at once. There was the other view, and it might be a more cautious policy, to keep the money until they saw how they were to get on; but the shareholders were entitled to 10 per cent. from the beginning. Everything was ready now to start the railway, and the Chairman proposed to construct, but the work had been wisely delayed by Mr. Underwood until he saw whether any of the great companies would help in carrying out the work. After referring to the different proposals that were made for the construction of the railway, the Chairman said that the question was to be decided definitely on Dec. 11, immediately after which operations would be begun.

Mr. ALISON, advocate, moved the election of the retiring directors—Sheriff Guthrie Smith, and Messrs. Wm. Lowson, of Balthayock; F. J. Gordon, W.S.; Mitchell Thomson, and James Duncan Smith.—Mr. GEORGE MACMILLAN seconded the motion, which was agreed to.

Mr. GREEN, from America, then gave a short account of the history of the company's property, after which Mr. JOHN WILSON, Edinburgh, seconded by Mr. JAMES ROMANES, O.A., moved the election of Messrs. Howden and Molleson, C.A.s, as auditors.

This motion having also been adopted the meeting separated.

POLCREBO TIN MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices, Great Winchester-street, on Wednesday.

Mr. MOLESWORTH ST. AUBYN, M.P., in the chair.

Mr. W. BATTYE (the secretary) read the notice convening the meeting, and the minutes of the preceding meeting, which were confirmed.

The accounts for the four months from Sept. 23 to Dec. 13 showed that the mine started with a balance in hand of 237. 12s. 9d., and that the call of 7s. 6d. at the last meeting realised 6187, the total receipts having been 6607. 7s. 9d. The cost sheets were 3107. 14s. 5d., and the payment to Messrs. Harvey, on account of the new engine, was 1500. The cost of procuring the leases was 527. 10s., and the balance in hand was 1147. 14s. 4d. The calls unpaid were 427, and the total liabilities 6447. 17s. The assets, however, reduced these liabilities to 497. 12s. 9d., which was the actual sum against the mine.

Mr. EDWARDS presumed that the mine, with this sum of 497, paid, would be free from debt, and that the engine was worth 5500. Mr. BATTYE replied that that was right, save that 2000 was still owing upon the engine, which could be paid by instalments during the next year.

The CHAIRMAN said he thought the accounts very satisfactory indeed, and he proposed their reception and adoption.—Mr. W. STRAPP seconded the motion, which was carried *unanimously*.

The following report from Capt. Martin was then read:—

Captain W. H. Martin reported that the work generally has been of a preliminary character, placing the pitwork, shafts, and levels in proper working order for the future development of the mine. The driving of the 30 level east from engine-shaft is a point of great interest, seeing the lode has improved at the deepest place, and by extending under the tin ground already shown there is every prospect of opening up a rich lode. The driving of a cross-cut south at the 17, on the cross-course, is a very important point. This in itself will open up a new mine. They have three lodes to intersect within 30 fms., which have been extensively worked on in the backs. He has carefully dialled and measured, and finds Great Wheel Worthy lode is only 30 fms. south from their present operations.

The CHAIRMAN: How are you getting the water out of Highburrow lode? Capt. MARTIN: By a horse-wheel; but presently the engine will carry it away. They were going to clear the Highburrow shaft to the 17, and then put in a small level, which would keep the water down.

The CHAIRMAN: As I understand, you found the engine-shaft deeper than you expected?—Capt. MARTIN: Yes. It is 14 fms. 3 ft. deep. As soon as the 17 in Highburrow shaft is cleared to the 17 fm. level we shall drive east and west from that shaft on the course of the lode in old ground. It is also our intention to drive a cross-cut south to cut the Great Wheel Worthy lodes, which form a junction with our main lode in the centre of our setts. In my report you will observe we find the lode producing 20 lbs. of tin to the ton.

The CHAIRMAN: In your judgment, as a practical miner you think the prospects satisfactory?—Capt. MARTIN: Yes. I do not know a young mine possessing better prospects.

The CHAIRMAN: As to the expense—have you given ample scope for the next four months in your calculations?—Capt. MARTIN: I have made every allowance.

The CHAIRMAN: This mine is, of course, a speculation, but from what I know of the country I think it is a very good one. I propose the adoption and circulation of the report.

Mr. J. STRAPP seconded the motion, which was agreed to.

A letter was here read from Capt. Chappell, suggesting that the remainder of the shares should not be offered to the public, but appropriated amongst those shareholders willing to take them. Mr. Mitchell, the purser, had, however

suggested that no more shares beyond the 2000 should be issued at par; that the remaining 1000 shares should be kept in reserve to be issued by-and-by. He considered the prospects of the mine to be such as to warrant their being quoted at a premium.

The CHAIRMAN: It is a pity that the public, who have been simply waiting to see what we have been doing, should come in now and get shares at par. I think, however, that this is a matter of detail for the committee.

After a considerable amount of discussion the consideration of the matter was adjourned.

Capt. MARTIN, in reply to questions, said the operations had been purely preliminary. He did not think they could bring tin to market for four months yet. The tin at present on the surface was worth about 29s. The lowest produce was, however, 40 lbs. to the ton.

The SECRETARY said he thought a call of 10s. would be enough. If they made a 10s. call they would place themselves in a first-rate financial position. It would bring in nearly 1000s., which would pay off every liability, and provide ample funds for the next four months.

Some of the shareholders expressed an opinion that the 10s. call might be avoided if the unissued shares were taken up and paid for.

The CHAIRMAN, who dissented from this proposal, ultimately moved—"That a call of 10s. a share be made, payable on the 22nd inst."

Mr. EDWARDS seconded the motion, which was carried.

The meeting terminated after passing a vote of thanks to the Chairman.

RAVENSCLEIFF MINING COMPANY.

The ordinary general meeting of shareholders was held at the Guildhall Tavern, Gresham-street, yesterday.

Mr. FREDERICK PETERSON WARD in the chair.

Mr. CHARLES GRAINGER (secretary) read the notice convening the meeting. The report and accounts were taken as read.

The CHAIRMAN said the report contained so full and exhaustive a statement of the affairs of the company, as to leave little or nothing to be added by way of comment or explanation. All that careful forethought, and the best skill at their command, and the means would permit had been done to develop the Ravenscleiff property, and, as would be seen with regret, their efforts had not been successful; not that there had been no gold found, for, as would be seen, it had been found in various parts of the mine; but the expense of getting it was so great, owing to the high rate of wages in that out of the way part of the colony, and the hard nature of the rock, that the operations would not pay. Those familiar with the affairs of the company from the beginning would remember that in the original prospectus it was stated that the earlier proprietors of the mine had in the lower levels developed portions of the lode, which contained a considerable amount of gold—2½ to 3½ ozs. to the ton—and it was hoped that at lower depths the deposit would not only continue, but extend in depth. This, however, much to their disappointment, did not turn out as they had hoped. Mr. Longbottom, a very competent engineer in every respect, who was sent out to Australia by the board, after careful examination and selection, advised that a tunnel should be put in at about 250 ft. from the level of the sea, hoping that more favourable ground might be struck there; but that operation also had not been sufficiently successful to justify the spending more of their limited capital in pursuing operations there. It must be borne in mind that persons with more means, and sufficient skill and courage who might see fit at some future period to resume operations on the property would have very fair chances of success at the lower levels at no very great expense, for there was no difficulty with regard to water or other matters of that kind. The property was now open for sale to any persons who might think fit to acquire it for the purposes of further exploration. There were some encouraging features set forth in the report. The directors took pains to obtain all the reliable information possible from Mr. Longbottom before he left the company's services, for the use of themselves or any other people who might purchase the property. With respect to the Duryea property, which was a very valuable property adjoining the very productive mines of the York Peninsula Company in South Australia, the directors thought it desirable to avail themselves of an opportunity which offered to acquire at a small cost of 70s. an adjoining section of 80 acres of mineral land, which would materially increase the value of the property, either to themselves, if they determined to work it, or to those to whom it might be sold. The shareholders would observe a most interesting feature in the report—that the board had, after very mature consideration, unanimously decided that the property in the Wakamarina gold field, recommended by their superintendent in New Zealand, should, if possible, be secured to this company. Mr. Turner, their superintendent, was, he might here remark, a gentleman in whom the directors placed a most perfect confidence. They were satisfied with him in every respect with regard to his management of the Ravenscleiff property, and their experience justified their confidence in his probity, diligence, and integrity in every respect. Mr. Turner had examined the available properties in the neighbourhood, and he gave one of them unqualified praise, and recommended its purchase. The property was situated in a ravine which came down from the small mountainous district through which the river runs, and the portion of it which they expected to acquire was about 600 ft. in length, and from 15 to 30 ft. deep, and as the water rushes down the gorge it is met at the end by a reef of rock and by a natural operation the water is descending is gathered and cast down towards the sea. It was proposed to divert the course of the river above their property, and to cause it to run in lower down than where the reef is. That would prevent the back flow of water, and would give them what would practically be a large lake. Very considerable quantities of gold had been taken up from this water, and Mr. Turner had taken gold out of the shallow pools which satisfied him that in all probability large quantities of gold would be found in the deeper portions of the water. The idea was to drain the water by an engine, and it was hoped that the engine at Ravenscleiff Mine would be available for the purpose. Then, of course, a large amount of alluvial soil would be available for operating upon, and it was believed that they would obtain a very good return on the small expenses of from 1000s. to 1500s. which they proposed to incur. The board would have preferred to consult the shareholders before deciding on this matter; but as it was important to secure the property, they telegraphed to Mr. Turner to acquire the property as speedily and advantageously as possible. The owner of the property had reduced the royalty from one-third to one-fifth of the profits. The Chairman then moved the adoption of the report and accounts.

Mr. RICHARD BYAM OTTLEY seconded the motion, which was carried unanimously and without any discussion.

On the motion of the CHAIRMAN, seconded by Mr. OTTLEY, Mr. George Clerihew was re-elected a director, and on the motion of Mr. OTTLEY seconded by Mr. CLERHEW, Mr. Ward, the Chairman, was also re-elected. Mr. George Thomas Rait was re-appointed auditor.

The CHAIRMAN said the report stated that "the directors continue to give their best attention to the company's affairs, and both they and the auditor, as heretofore, allow their claim to remuneration to remain in abeyance." The directors and auditor, of course, did not forfeit their claim at all. It remained in full force; but for the moment they did not propose to claim them. If their future operations were successful their claim for remuneration would, of course, be as good as before. The expenses of the company were as small as they could possibly be made. They were charged scarcely any rent, and the secretary, accountant, and the other officers rendered cheerful service at a small rate of remuneration. The meeting then closed with the usual compliment.

SOUTH-EAST WYNAAD ESTATES AND GOLD MINING COMPANY.

The report of the directors prepared for presentation at the meeting on Tuesday next submits accounts showing a cash balance of 496s. 16s. 6d., and a balance of assets over liabilities of 5180s. The satisfactory progress in the development of the Elizabeth Mine has continued since the middle of June, but there have been serious causes of delay—a monsoon of unprecedented severity and duration; the non-delivery by the Bombay engineers of the small pyrites mill till a late date being many months overdue; and the delay in obtaining from Madras, and the worthless character when obtained of the steel shoes for the 12-stamp battery, which battery has been stopped for days and even weeks from this cause. In spite of all these and other hindrances it appears that with nine heads at first and afterwards 15 heads of stamps there were crushed in the five months to November 58½ tons of stone, which yielded 73 ozs. 1 dwt. 6 grs., or at the rate of 2 dwts. 17 grs. of gold to the ton. The pyrites and tailings from these 58½ tons are estimated to contain 275 ozs. 16 dwts. 6 grs. of gold or an average of 9 dwts. 12 grs. to the ton, making a total average of 12 dwts. 5 grs. of gold to the ton of stone. Three remittances of gold have been received to date, amounting to 46 ozs., and have realised 151s. 14s. 3d., averaging 3s. 5s. 9d. per ounce. The average parting of the gold and silver was gold, 771; silver, 213. Mr. Cooper, the general manager, after reporting upon the various points of operation at the mines, says:—Altogether a large amount of underground work has been done during the past six months, and I consider the development very satisfactory. Crushing and reduction works; with the exception of a few stoppages for repairs and alterations crushing has been going on regularly at the Elizabeth mill night and day since the middle of June. The results of the different crushings I duly sent to you, the amount of free gold we have obtained has averaged about 3 dwts. per ton; the pyrites has not yet been treated, but according to assays made, it will average about 3½ ozs. per ton. We are now crushing No. 5 Elizabeth and pyrites continue to do so, from this and No. 6 we obtain the larger amount of pyrites. Owing to the makers not delivering the pyrites mill to the time specified, the treating of these ores has been delayed. It is, however, not erected as also the two amalgamators, and we shall start it to-morrow. As we cannot find any trace of arsenic in the pyrites I do not think we shall find any difficulty in treating it. . . . In conclusion, all I have to say is that both at the mines and reduction works we are in good working order, and by the beginning of January I hope to have over 100 men working in the Elizabeth Mines, and the 20 head battery at work as well as the 12 head, in all a capacity of crushing 60 tons a day.

Under the head of cultivation the directors regret to report that in common with nearly the whole district the season 1881-82, resulted in a considerable loss on the coffee crop (as shown in the balance-sheet), and they fear they have no chance of avoiding a further though not so great a loss in the present season. Their instructions are not to spend 1s. more than is actually necessary to keep the coffee alive, and to prevent weeds interfering with the cinchona, of which there are planted and growing, 222,700 trees. The excessive drought last year, and excessive rainfall this season have caused more failures than was expected, especially on the more exposed Needlerock estate, or the total of growing trees have been higher, but the three and four year trees on Richmond have only lost 1 per cent., and the wet has brought them on most satisfactorily, being now 9 to 10 ft. high, many 15 ft., and their girls equally good, the remainder 2½ to 4 ft. high, and the general condition of the whole plantations, including the special sort, Ledgerianus, is reported highly satisfactory, and is already a valuable property if judged by the success of the Government garden.

WEST WHEAL ROSE

(LIMITED).

SEVEN LODES ALREADY DISCOVERED.

BOUNDED ON FOUR SIDES BY THE SHEPHERDS MINES.

"Equal in value to its neighbour."

CHARLES KNEEBONE.

"A safe and sound investment."

RICHARD SOUTHEY.

East Wheal Rose yielded £280,000 profits.

Old Shepherds paid £240,000 profits.

West Chiverton paid £166,000 profits.

North Shepherds paid about £300,000 profits.

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ROYAL SCHOOL OF MINES.

The tenth annual dinner of the professors, students, and others interested in this School was held on Monday evening last at the Criterion Restaurant, Piccadilly. The chair was occupied by Mr. E. L. J. RIGSDALE (late of the Royal Mint), and the company, which numbered about 120, included Prof. Huxley, Dr. Geikie, Prof. Stokes, Prof. C. Roberts, Prof. Judd, Gen. Martin, Sir Chas. Crawford, Mr. Blanford, Mr. Matthey, Prof. Huntington, Prof. Martin, Col. Fielding, Prof. Guthrie, Major Boileau, Mr. Rutley, Mr. Danby, &c.

At the conclusion of the dinner the customary loyal and patriotic toasts were proposed and responded to.

The health of Her Majesty the Queen having been drunk with enthusiasm.

The CHAIRMAN next proposed the health of the Prince and Princess of Wales, and the other members of the Royal Family, and in doing so observed the Prince of Wales, as the Duke of Cornwall, might be said to be at the head of the great mining interests of this country. (Cheers.) It was a noteworthy fact that the liberality by which the leases of the Duchy of Cornwall were characterised was such as to render them always an object of attraction to all mining adventurers. (Applause.)

The toast of the "Army, Navy, and Reserve Forces," proposed by the Chairman, was responded to by Major-Gen. Martin for the Army and Sir Chas. Crawford for the Navy.

The toast of the "Past and Present Professors of the School of Mines" was then proposed by Mr. Danby, who, as an old student, bore testimony from personal experience as to the great value of the instruction imparted to the students.

Prof. STOKES, responding for the "Past Professors," referred to the condition of things existing at the time he left the University of Cambridge to join the Royal School of Mines. At that date there was not at the University perhaps quite so much practical acquaintance with Nature in the way of experiment as might have been desirable, and on coming to the School of Mines he had had apparatus placed in his hands which he had not worked with before, and it had become his pleasure as well as his duty to familiarise himself with the new means of instruction, and in so doing he hoped he had improved himself while communicating knowledge to others. Since that time large museums had been built at Cambridge, including one for experimental physics. (Hear, hear.)

Prof. HUXLEY, who was received with loud applause, then responded for the "Present Professors." Commencing with reference to the fact that it was now 28 years since he first became professor at the School of Mines, the speaker went on to say that in looking back upon the past he could not but be struck by the remarkable change which had taken place in the staff since he first joined it in 1854. At that time there were seven professors, and he was sorry to say that the irreverent spirit which characterised London Society in general, had christened the very vigorous and eminent body of men who formed the nucleus of this school by the name of the "Jermyn-street Gang." (Laughter.) Of those seven professors—Hunt, Playfair, Forbes, Ramsay, Smyth, Percy, and Williams—it might now be said in the words of the old song "Some were dead, and some were wed, and some were gone to sea." All, or almost all, of those men were men who would have made their mark anywhere; several of them were men who had left a lasting mark upon the history of science. (Hear, hear.) After reviewing in terms of affectionate regard and admiration the careers of these eminent scientists, Prof. Huxley proceeded to express the belief that the School had not suffered in energy or capacity from the time when its teachers were distinguished by the title he had mentioned. The changes and innovations introduced during recent years, and which had been often greatly misunderstood, had arisen from the desire on the part of the authorities and the professors to make the teaching of the school what it should be. The steps that had been taken were, he believed, all of them absolutely necessary under the circumstances of the case in order to make the two branches—the Normal School of Science and the Royal School of Mines what they ought to be. It was his firm conviction that if the professors did their work properly, and if the scheme of instruction were carried out thoroughly and well, there was no school in Europe in which the instruction for the sake of the student, with a view to his needs, was so thorough and complete as it was in this Institution at the present moment. (Hear, hear.) He did not say this from any spirit of scientific Chauvinism, which would lead him to unduly exalt any institution with which he might be connected, but because he believed it was a simple matter of fact. In his opinion the credit and reputation of the School of Mines, in future years, would stand at even a higher level than it had done in the past. (Cheers.)

Prof. JUDD proposed the next toast, "The Geological Survey," and in doing so dwelt on the relationship existing between that body and the School of Mines. Former students of the School were now at work on geological surveys in India, Germany, Sweden, and the United States.

Dr. GEIKIE responded and said he rejoiced to find that the old bond of union between the geological survey and the School still existed, and was not likely to know any severance. (Hear, hear.)

The CHAIRMAN, in rising to propose the toast of the evening, "Prosperity to the Mining and Metallurgical Industries of this Country," coupled with the Prosperity of the Royal School of Mines," was received with loud and prolonged cheering. The prosperity of the School of Mines was so closely connected with the prosperity of the mining and metallurgical industries of the country that what effected the one must necessarily affect the other. Because so long as mining and metallurgy were in a flourishing condition capitalists were encouraged to invest their money in those industries, and there were, as a consequence, far more avenues for employment for the student than was the case when those industries were depressed. It was unnecessary to remind those present that the mining industries stood in a very different position at the present moment to what they did when he (the speaker) was a student in 1853. At that time the opportunities and avenues open for a student—particularly in the home districts—were far more numerous than was now the case, and the explanation of this state of things was to be found in the fact that at that time the prices of all our metals stood at a very much higher figure than they did at the present day. Reference to the pages of the *Mining Journal* of 1853 would show those interested in the enquiry that at that date there were more than 610 mines open and at work in the United Kingdom, and occupying a position in the Share List of the day. Of those 610 mines no less than 107 were in a dividend-paying position, and they were returning for the year ending December, 1853, dividends amounting in the aggregate to 329,000s. per annum. At that period everything connected with the mining industries looked very rosy, and the avenues for the employment of those who had specially qualified themselves for the work were very numerous. Since that time there had been a gradual collapse in the prices of metals throughout Cornwall and all the other mineral districts of the United Kingdom. An examination of the Mining Share List of the present day would bring to light the fact that the long list of 610 mines had then been selling at 24s. per ton; it could now be had for 13s. 10s., exhibiting a change in value of 42 per cent. Tin had dropped 25 per cent., and silver had suffered depreciation to the extent of from 17 to 18 per cent. In consequence of that great collapse in the prices of metals the revenues from the Duchy of Cornwall had shrunk to one-third of their former volume. Further he desired to point out—and he thought all those present possessed of a practical acquaintance with mining matters would agree with him—that even this miserable total of 217 mines at present in working would have been far had it not been for the introduction of dynamite for blasting purposes, and also for the introduction of rock-drills. Indeed it was no exaggeration to say that but for the beneficial operation of those two causes half of the mines now open would have had to shut down. Now, what he wished to ask was the cause which had brought about this distressing collapse in one of the most ancient industries of this empire? The peculiarity of the situation was this. In this country there was only one standard of value—namely, gold, and this metal was becoming scarcer every day. Three causes were at work reducing that metal daily more scarce. One cause was the very considerable falling off that had taken place during the past few years in the production of gold. The second cause was the immense consumption of the precious metal by the new currency operations put into force by several of the nations of Europe, notably Germany and Holland, and by America, within the last few years. This adoption of a gold currency by the countries had absorbed a vast amount of the precious metal. The third and last cause was the great increase which had recently taken place in the consumption of gold for the production of various articles of luxury. Those three causes operating concurrently had together caused a scarcity of this metal—a scarcity which was forcibly illustrated by the tremendous fall which had taken place in the value of all other metals. In addition to the causes enumerated other circumstances had operated in the same direction. For instance, in working iron, tin, or copper mines it was necessary to pay for all the operation of winning and treating the ore in gold—in this very precious metal, which was growing scarcer day by day. Further the produce of those mines—whether they were iron, tin, or copper, had to be sold for the same scarce metal. Now, in order to obtain the same gross value as formerly, it became necessary to raise a greater supply of produce, and with the greater supply there came an inevitable consequence a fall in its value or market price. Such in his judgment was the reason why there had been so great a fall in its value of all metals other than gold. Those who could look back to the year 1853 would recollect that at that time the newly discovered gold mines of Australia and California were pouring into the markets of the world so enormous a quantity of the precious metal as to cause quite a sensation amongst political economists and financiers. It had been imagined at that time that gold was going to become so cheap that the prices of all commodities, including that of all metals, were to rise so enormously in value that in making purchases it would be necessary to give 2s. for what a man formerly gave only 1s. With the view of proving that this fall in the value of gold would be the cause of the

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versal distress, and that it would have a most prejudicial effect upon the industries of the world at large, the eminent French political economist M. Chevallier wrote a book in which he recommended that there should be a silver standard of value instead of a gold one. As illustrating the notoriety this work enjoyed, he (the Chairman) might add that it was translated into English by Richard Cobden. That the subsequent course of events had taken a course exactly opposite to that predicted by M. Chevallier was now a matter of history. Instead of the prices of metals having risen, as was confidently foretold, they had fallen to the extent already mentioned. This fact illustrated very clearly that old sarcasm of Artemus Ward—"Don't you never prophesy unless you know." (Hear, hear, and laughter.) Now, in his opinion, there could be no recovery in the prices of all the metals, and no revivification of the industries of Cornwall and the other mineral districts of the country, together with those metallurgical industries which were so closely associated with the history of mines unless one or two causes took place. That was to say unless the supply of gold was very largely increased, or unless some other metal was elevated to share a portion of the supremacy of the more scarce metal—gold. (Hear, hear.) That was the plan which had been proposed by France and America—to raise silver to a fixed relative value with gold. When that was done, there would exist a greater supply of the available standard by which the value of everything was measured, and with the possession of a greater supply a reasonable recovery in the prices of all the metals might be looked for. Many of those present would recollect that some years since an International Commission was proposed—the idea had come in the first place from America—in order that this subject might be discussed. The Convention met at Paris, and the terms in which the French and American delegates drew up a joint resolution were so pregnant and so full of application to the needs of the present time as would, with the permission of the company, read them. They were as follows:—"The delegates of the United States and France make the following declaration: The depreciation and fluctuations in the value of silver have been, and are, injurious to commerce, and to general prosperity, and the establishment of a fixed relation of value between silver and gold would produce most important benefits to the commerce of the world." If one might venture any criticism upon these declarations it would be to the effect that they were too narrow in their application and proposed scope, and that the fluctuations of other metals should also be considered. Unfortunately the Government of this country had not exactly seen its way to follow the lead of France and America, it being contended that the standard of gold had existed in this country for a long period of time, and that the country had been very prosperous during those years, while the further argument had been advanced that the supremacy of the gold standard had never been seriously attacked. Practically the Government admitted that this single standard of value was operating injuriously to commerce, but that it had not been seriously attacked. He was fully prepared to allow that Governments could not be expected to act unless the great commercial communities of the country operated with them from behind, and unfortunately the great majority of men engaged in commerce were so immersed in business cares and anxieties that this great question of the extraordinary scarcity of the precious metal, which was hampering all the industries of the country, did not receive the attention it deserved. He did not know from what better quarter an attack on the supremacy of the gold standard could come than from the head and centre of the oldest industry of the United Kingdom—that of mining. (Hear, hear.) In the meanwhile some pressure should be brought to bear upon the Government of this country to act with these of the United States and France, and also of Italy, with a view to the adoption of a bi-metallic currency, and to the raising of silver to a fixed relative value with gold, so that the mining industries of the country might be lifted from their present depressed condition. (Hear, hear.) It was often contended that this depression had been caused by the increased supply of metals from foreign sources; but, however large that supply might be it could not account for the enormous falling off in prices, or the wide-spread shutting up of mines that had taken place. In conclusion, the Chairman apologized for having spoken at such length, but pleaded that the importance of the subject, and the immediate interest it possessed for all present would hold him excused. He had been anxious to avail himself of the opportunity the occasion presented of explaining to the best of his ability the one way in which, in his opinion, matters might be righted. (Loud cheers.)

The toast, having been drunk with much enthusiasm, was responded to by Mr. MATTHEY and Prof. C. ROBERTS.

The other toasts which followed were "The Old Students," proposed by Mr. SMITH, and responded to by Mr. BLANFORD; "The Present Students and the Committee," proposed by Prof. GUTHRIE, and acknowledged by Mr. KAMENSKY, and "The Health of the Chairman," proposed by Prof. RUXLEY, in the unavoidable absence of Prof. Lockyer. The proceedings terminated at a late hour.

ST. JOHN DEL REY MINING COMPANY.

The report of the directors prepared for presentation at the meeting on Wednesday next states that the produce of gold from April 12 to Oct. 11, both days inclusive, was 118,952-1 oits., or 13,713-2409 ozs. troy. The produce for the corresponding period of last year was 156,430-3 oits., or 18,033-8686 ozs. troy. The net profit on the working of the Morro Velho Mine for the half-year has been 18464.4s. 4d.; reserve fund interest during the half-year, 11551.15s. 2d.; amount of net profit brought from last year was 7602.14s. 7d.=37621.14s. 1d. The London expenses for the six months were 12791.13s. 11d.; year's income tax on profit brought from last year, 5921.17s. 11d.; six months debenture interest, 17501.=36221.11s. 10d.; leaving to carry forward 1401.2s. 3d.

The unfavourable results of the past half-year's workings are mainly due to the flooding of the eastern or sump sections of the mine, whence the best class of mineral is derived. This flooding was caused by unusually heavy rainfall in the months of January and February. The quantity that fell in the large crater-like chasm, some 2 acres in extent, left by the falling in of the old mines, was very great. Added to this a new feeder was opened up by the floods, into the western workings. These combined raised the water in the old mines to an extraordinary height, and the pressure from it on the dam placed in the level connecting the old mine with one of the shafts broke it away and let the water down into the sump of the present workings. The pumps usually equal to the drainage of ordinary feeders in the mine proved unequal to this extraordinary duty, and on being driven at more than usual speed, in the anxiety to get the mine unwatered, gave way on three several occasions, thus adding to the difficulty. It was not till Aug. 4 that the sump was free from water, and not until a much later date that full working could be resumed. Every precaution has been taken to prevent a recurrence of a like casualty. A new dam has been constructed in the level, equal, it is believed, to any pressure that can be brought to bear on it. Measures have been taken to take up the water from the feeder above referred to, and raise it to the surface from a shallow level. The pumps have been strengthened, and a more powerful pumping-wheel is being completed with all practicable dispatch.

As regards the mineral formation, the plans and reports for the last two years show a gradual diminution of killas and other less auriferous matter in the lode; but, as a whole, it is still wanting in the compactness of mineral which distinguishes it a few years since. Owing to the interruptions above named, the sinking in the sump has been only 10 ft., against 31 ft. 6 in. during the corresponding period of last year. The quantity of mineral stamped during the half-year ending 31st Dec. was 33,657 tons. The average gold contents by assay of the mineral stamped during the half-year ended Aug. 31 was 4-560 oits. per ton, of which 3-307 oits. was recovered and 1-253, or 27-6 per cent., was lost in the tailings and slimes, against 1-819 oits., or 28 per cent., on the previous half-year. By the check assay of the tailings for these periods the recovery appears rather less. Taking the average of the last five years, the recovery, by the means of the unrecovered contents and assay of tailings, appear almost exactly the same—e.g., 72 per cent. of the assay contents of the mineral stamped, and, therefore, there can be little doubt that the unrecovered gold contents has been, as shown.

The directors have during the period repeatedly referred to the matter in their reports, lamenting the loss, but still hopeful of means being found to reduce it. They took counsel with the reduction staff at the mine, and with a large number of others, competent from practical knowledge and scientific attainments to advise them, but, as will be seen, without any beneficial results. Rather more than a year ago they determined to make enquiries in California, and the result is very encouraging. Practical experiments, carried out on a sufficiently extensive scale at the mines, leads them to hope that a considerable portion of the loss hitherto sustained may be recovered by machinery of a simple and comparatively inexpensive character. This is now being made, and will be forwarded to the mines forthwith.

The produce of gold from the Culaba Mine during the four and a half months the portion of the new stamps erected has been in motion was 3878-0 oits., or 447-0692 ozs. troy. The quantity of mineral stamped was 2428 tons, and the yield therefrom 1-597 oits. per ton. The financial position of the company at the close of the half-year was in England—cash at bankers, 18991.19s. 5d.; gold produce due January and March, estimated at 40,0001.=41,8991.19s. 5d. To pay drafts running due, December, January, and February, and 30001. loan from bankers = 34,0001. In Brazil there was cash at Morro Velho, 48031.11s. 8d.; Nicolson and Co.'s cash and bills on London, 13,2371.8s. = 13,6801.19s. 8d. To pay Nicolson and Co.'s drafts on Rio, 5-321.7s. 2d. The reserved fund investments—cost, 45,9751.11s., and the approximate present value is 50,5141. No progress has been made towards obtaining relief from the provincial tax on the gold produce. Appeals are being continuously made to the Imperial Government for the protection the directors feel the company is entitled to at their hands, and they are still resolutely pressing the question forward in the proper quarters.

SOUTH WHEAL CROFTY.—At the meeting on Dec. 8 (Mr. H. J. Lean in the chair), the accounts showed a loss on the 12 weeks' working of 8641.18s. 2d., and a total debit balance of 35861.11s. 2d. A call of 7s. 6d. per share was made. Capt. Thomas, Pascoe, and Phillips reported upon the various points of operation. Having passed through a lode in the 192, to the west of this end, they were hoping for an improvement shortly. The 180, west of cross-cut, on the north lode, was at present working very much better than it had been, producing fine stones of tin, mende, and wolfram. The lode generally had been worth about 101. per fathom, and it was now probably worth 151., or more. The new compressor was fixed, and ready to work, and with larger boring machines, also a full supply of air, they would in future be able to drive the end more rapidly. Capt. Thomas explained that the 180 west, on the north lode, had very much improved, and was probably worth 251. a fathom. It had not been reported as worth so much, lest it might not continue. The granite in some parts was also of a very much better character than it had been. They hoped to have a great improvement in driving west from the present end back towards the cross course, where they had entirely unexplored ground. The price of tin was 61. less than at their last meeting. They now made 531. 10s. of it.

MECHANICAL AND MARINE ENGINEERING EXHIBITION.—It is proposed to hold an exhibition of this class at the Agricultural Hall, Islington, in July next, and will include exhibits relating to mining, casting, forging, rolling, workshop tools, and apparatus for the treatment of raw produce. Mr. Samson Barnett, jun., is taking an active part in the organization arrangements, and the details will be shortly advertised.

Mining Correspondence.

BRITISH MINES.

ANDERTON.—W. J. Bowhay, Dec. 18: We have been going on satisfactorily since our last report in all departments. We have been hindered by frost, which impedes our dressing work; but I am glad to say the milder weather which has come in our favour again. The lead in the bottom of our level going down is really splendid. We have been breaking some rocks of tin as big as a man can lift, which, I believe, is three parts tin; and how you have arranged to have a steam-engine erected, we shall have very rich stuff to stope directly the pumps begin to work. Your early prospects look very bright indeed.

BEDFORD UNITED.—Henry Trezise, Dec. 12: We have not taken down the lead in the ends on the north lode, consequently there is no change. The tribute pitches are about the same as last week. McCallan's engine-shaft is nearly down the required depth, the lode maintains its size and character. The 42 west is without change. The same level east is near being holed to the winze, lode without change. The lode in the 33 east is improved in size and value, is 6 ft. wide, and worth 30l. per fathom, a very fine lode. The winze, west of shaft, is down 5 fms. below the 30, lode is without change. The stope is about the same value. The lode in the 20 east is improved in appearance and very promising.

—William Phillips, Dec. 13: Special Report: I did not inspect the works on north lode yesterday, but was informed that the 115 east, and 103 west are looking very promising, both points yielding ore. The 115 east is becoming very interesting on account of being near the cross-course, or great slide, on both sides of which the Wheal Marquis became so productive. The tribute pitches here are still looking well, and further considerable yields of copper and munda will be returned from them.—Bridge Lode: I went over the different points of operation here and found but little change either in the shaft or in the western parts. The slide referred to above intersects this lode some distance to the west of the present workings in the shallow levels, but on account of its great dip eastward the shaft and deeper levels will be very near to it, and I do not anticipate any important discoveries in this direction until a nearer approach to the slide is made. The 42 east is looking more promising, and is letting out water freely. As soon as this level is communicated to the winze from the 30, which will be done in about another week, a cross-cut will be put out north to see if any part of the lode is yet undiscovered, and, judging from appearances in the upper level, I consider it very probable that more lode will be found. The appearance of the lode in this level for the first 20 fms. in length, east of the shaft, as well as in the backs of the 30 and 40, warrants the belief that the whole of the ground from the 42 to near the surface will be profitably stoped. I find in comparing the gradual laying open of this lode with that of the famous Wheal Marquis in the same mine, that the progress is attended with remarkably similar results. It is in the memory of many, and an inspection of the plans of the mine will show that the rich eastern shoot of ore on that lode was remarkably flat from the Marquis shaft for 100 fms. in length, the 47, 58, and 70 yielding no ores of consequence for a considerable distance east of the slide. East of these points the ore was continuous from the 35 down to the 130, a magnificent course of ore for 100 fms. in length in the 70 and successive levels to the 115, and I venture to predict similar results for the Bridge lode. The 30 east is at present in a splendid course of ore, west of the 20 east, a little in advance of the 40, the lode in the 30 is now 6 ft. wide, and is letting out water to view, without seeing the north wall, composed of rich quality black and grey oxide, and a large quantity of sulphuret copper with munda and gossan of finest description. The bulk of the lode will produce ores of great value, which will be proved in successive samplings, and most of it will be saved. I estimate its full value to be near 70l. per fathom. The leader part being 3 ft. wide is worth 50l. per fathom, and I have no doubt of there being near 20l. worth of ore contained in the north part of the lode which is now being taken down. The character of the lode, together with the excellent nature of the strata, guarantee the success of the ore, and I have great confidence in recommending the mine for safe and permanent investment.

BLUE HILLS.—S. Bennett, R. Harris, Dec. 13: In the 80 there is no change, to notice, the men having been engaged in repairing balance-bob, &c. In the 66 east end the lode is 1½ ft. wide, of a very promising kind, and worth 7l. per fathom. On the Balduh lode the 40 east end is worth 7l. per fathom. The 30 east end is at present unproductive, and the Gumpas adit west end is worth 4l. per fathom.

BULWARK.—R. Rowe, Dec. 13: The cross-cut in Prior's end is not yet through the east lode, which is now showing to be a considerable size; it continues to be intermixed with copper. We have at last cut through the Bulwark lode in the Bulwark cross-cut, and have now taken the men to open out and drive upon the ore part of it to prepare for stope ready for next month, and I expect will thus enable us to make good returns. There is no material change in the 40 drivings north and south since last reported on. The weather during the past week has been a little more favourable for surface work, and we have made good progress during it.

BULWARK UNITED.—W. Northey, Dec. 13: The stope in back of the 30 are looking well, and will yield an average of 18 cwt. of silver-lead ore per fathom. The stope in back of the 12, under adit, will yield about 10 cwt. of silver-lead ore per fathom. A stope in the 50 is producing good saving work for the dressing floors. In the stope in back of the 15, under adit, Marvin's lode will yield 10 to 12 cwt. of silver-lead ore per fathom. In the cross-cut north, in the 50, the stratum is more congenial for the production of lead ore, and the ground a little easier for driving. There is no change in the character and value of the lode in the 100 since my last advice. The men have been stopping on account of the severe frost and snow, which shuts up the wheel by night. The dressing and drawing are also at a stand, and unless the weather changes a number of men will be thrown out of work.

CARNARVON COPPER.—W. Darby, J. Roberts, Dec. 12: The end at the 56 (Garnon) continues to look very kindly, and letting out a little water with strong patches of sulphur along the heading side of the lode. The sump at the 70 (Cae-y-groes) has become very poor and hard; therefore, we have suspended it, and put the men up to the 36 (Cae-y-groes) to cross-cut the lode under the old sump, and where a large body of ore has been lost. The lode at present has a very kindly appearance, and it would be nothing surprising if we should shortly cut into a good bunch of ore here. All the tribute pitches continue much the same value as for some time past. On surface we are at a standstill, the recent heavy fall of snow, and the sharp frost has completely blocked up everything, and it is with great difficulty that we manage to keep the water-wheel to pumps going.

CARN CUMBORNE.—W. C. Vivian, Dec. 14: The 85, west of sump, on the south lode, is to-day looking better than it has ever done. The lode altogether is 3 ft. wide, and the north part, which varies from 1 to 1½ ft. in width, is made up of rich yellow copper ore and fluor-spar. It will yield about 2 tons of very good ore per fathom. The lode has the same character and composition as the great copper formations, of which I have had long experience in some of the best copper mines of this district, and I, therefore, anticipate with a certain degree of confidence further improvement in driving this level towards the cross-course, which is about 30 fms. ahead. I am also of opinion that this discovery which we have made is the top of a large and valuable lode of copper, which we shall find continuing to a considerable depth below the 95, beneath the copper ore, and confidently anticipate on finding a large tin formation, as was the case in the adjoining mine—Dolcoath. The 70 cross-cut north has not yet reached the north lode. In the 40 west the north lode is 4 ft. wide, carrying a leader of copper ore on the south wall, and presenting sufficient indications to lead to the expectation of our making a discovery of value by continuing this level further west.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Borlase, Dec. 13: Caunter Lode: The 24, west of Endean's cross-cut, is producing saving work for lead; the bottom and back are showing some very fine lead. The level north of cross-cut, on the north and south lode, is very favourable for driving, and is producing lead, but not enough to value; the lode is very porous, and is letting out a stream of water from the bottom of the end. The intermediate level, west of No. 1 winze, below the 14, east of the caunter lode, is producing 10 cwt. of ore per fathom. The 14 east is not looking so well as when last reported on, owing to some small vugs coming in the lode, which is now producing 20 cwt. of ore per fathom. The winze in the advance of this end from adit is producing 20 cwt. of ore per fathom. The stope east of No. 2 winze, for the part being carried, 15 cwt. per fathom. Stope west of No. 3 winze, 25 cwt. of ore per fathom; but part of the lode is standing on the footwall. Stope east of Big Pass, 18 cwt. of ore per fathom. The winze below the 14 west is sunk 5 fms. on the south part the junction, and I have now put the men to drive to the north to find the hanging wall to prove this point. There is a little lead in the end, not enough to value.—East and West Lode: The lode in the diagonal shaft is producing a little more lead than when last reported on, but not to value. This shaft is now 10 fms. 3 ft. below the 14; as soon as we are deep enough for a fork and have put a collar in, I shall drive east and west on the course of the lode, to accomplish which it will take, no doubt, two weeks more. I shall be greatly disappointed if we do not meet with a very productive lode after driving west about 3 fathoms. The 14 end, west of diagonal shaft, is producing 10 cwt. of ore per fathom. The stope in the back of the 8 west is carried forth to the breast, and I contemplated rising in the back to unwater the bottom of the adit between the footwall and diagonal shaft. The weather continues very unfavourable for outdoor work, and the dressing department is standing, and unless we can crush to-morrow I shall be obliged to stop the winding-engine, as we are full of stuff at surface. The roads being so bad we have not been able to send down the lead to the depot; consequently we have a parcel at each place, this, with no dressing being done for the last week, has delayed our sampling. I have taken advantage of the stoppage to change our crusher rolls, which have got very thin.

COED-Y-FEDW AND PANT-Y-BUARTH.—R. Prince, Dec. 15: The south driving on the cross lode has now been extended to a point in a line underneath Rowland's shaft. I have, therefore, decided to put the men to rise up, so as to obtain a communication between our workings and the bottom of Rowland's shaft. We shall then not only secure ventilation for the whole mine, but will be able to raise the large quantity of stuff that is now left at the bottom. The joint we intersected in the 107 cross-cut looks very well, but we cannot operate upon it until we have the communication referred to. The prospects are I think, very satisfactory.

CROOK BURN.—J. Craig, Dec. 7: I have nothing new to report in the end of the new level this week; 8 fms. 2 ft. have been driven for the past month and the driving is set for the same price per fathom for the present month. The men have been compelled to give up working to-night for the week, it being quite impossible to keep the level month open, the snow blows it up so fast.

CWMYSTWTH.—Joseph B. Rowe, Dec. 13: I am pleased to say that the lode in the stope under Level Fair is opening out well, and maintains its masterly appearance, containing lead throughout, for a width of 12 ft. In clearing the adit from the western end of this stope we find the lode equally as productive. The tribute pitches worked throughout the mine are producing enough lead and blende to enable us to maintain our usual monthly samplings. Number of pitches now worked, 13, by 39 men. The heavy fall of snow we had here about a week ago put a stop to all our surface work. We have also been getting sharp frost every night. A deep cover of snow is still on the ground, and water courses full. We sent out samples yesterday of 30 tons of blende for sale on Jan. 2.

CWM DUYFOR AND BRYNARIAN (Brynarian Mine).—J. Davis, Dec. 12: Joseph's Level: The lode improves in width and appearance.

D'ERESBY MOUNTAIN.—J. Roberts, W. Sandoe, Dec. 13: We have no particular change to report in any place since our last report. The No. 5 cross-cut, which we referred to last week, is looking very well, both north and south. At the top of the rise we are opening and squaring up the ground, so as to be able to drive north and south from this point. The lode is about the same value as last reported. The stope in the bottom continue the same. The frost, which is very severe, has partially stopped our dressing. We are able to treat the stuff at the picking grate, but the crushing we cannot keep going continuously.

DEVON FRIENDSHIP.—F. R. Daw, W. Gill, Dec. 13: Setting Report: The 42 west of Bennett's shaft, is set to four men at 10l. per fathom; the lode is 4 ft. 10 in. wide, and worth 12l. per fathom for arsenical munda and tin. We are occasionally breaking some very good stones of copper ore from this end. The No. 1 stope, in the back of the 30, west of Bennett's shaft, is set to two men at 2l. 10s. per fathom; the lode is 4 ft. wide, and worth for arsenical munda 10l. per fathom. The No. 2 stope, in the back of this level, is set to two men at 2l. 5s. per fathom; the lode is 8 ft. wide, and worth for arsenical munda 6l. per fathom. The 12 end, west of Bennett's shaft, is set to two men at 4l. 10s. per fathom; the lode is 4 ft. wide, and worth for copper and arsenical munda 5l. per fathom; this end is improving for copper. The stope in the back of this level is set to two men at 2l. 10s. per fathom; the lode is 7 ft. wide, and worth for arsenical munda 8l. per fathom. The 15 end, east of winze, is set to four men at 2l. 15s. per fathom; at present the lode in this end is small and not to value; but we believe in a few days the lode will open out to its usual value per fathom and size. The No. 1 stope, in the back of this level, is set to two men at 2l. 10s. per fathom; the lode is 3 ft. wide, and worth for arsenical munda 6l. per fathom. We have put two men to drive and stope west of the winze at 2l. per fathom; the lode is 4 ft. wide, and worth for arsenical munda 7l. per fathom. The No. 2 stope, in the back of Bennett's shaft, is set to four men at 2l. 5s. per fathom; the lode is 2 ft. 6 in. wide, and worth for arsenical munda and tin 7l. per fathom. No alterations in the price for tramming, filling, and landing.—Surface Operations: We are sorry to inform you that we have been greatly impeded in our dressing operations with the frost and snow; the weather to-day is much milder, and we are pushing on with all possible speed again with dressing.

DEVON GREAT CONSOLS.—Isaac Richards, Dec. 14: Wheal Josiah: In the 144, east of the count-house shaft, on the new south lode, the lode is 4 ft. wide, composed of capel and quartz, with small quantities of copper and munda ore. —Wheal Emma, Inclined Shaft: In the 137 east, east of Friend's cross-cut, the lode is 3½ ft. wide, and composed of capel, quartz, peach, fluor, some copper ore of good quality, and 1 ton of munda per fathom.—New Shaft, New South Lode: In the 115 east the drive is being continued by the side of the lode for more speedily progress.—Railway Shaft: In the 205 west, on the south part of the lode, the drive for the same reason is also being continued by the side of the lode. In the 190 west, on the south part of the lode, the lode is 4½ ft. wide, and worth 2 tons of ore and 2 tons of munda per fathom, and its general character is most promising. In the 180 west, on the south part of the lode, the lode is 4 ft. wide, composed of capel and quartz, with a little good quality copper ore, and 1 ton of munda per fathom.—Watson's: In the 100, west of the engine-shaft, the lode is from 4 to 5 ft. wide, of a promising character, and yielding good stones of copper and munda ores. In the western shaft sinking below the 20 the ground continues of a congenial character for the production of mineral. In the 20, east of the western shaft, the lode is 2 ft. wide, yielding some saving work of copper and munda ores.

DEVON GREAT UNITED.—Isaac Richards, Dec. 14: In the 120, east of Wilford's shaft, the lode is 2 ft. wide, and yielding small quantities of copper and munda ores. The distance driven during the past week is 2 ft. In the 120, west of Wilford's shaft, the lode is 3 ft. wide, composed of capel and quartz, with peach, munda, and a little copper ore. The distance driven during the past week is 1 ft. 6 in. We hope to have the rock-drills at work in these two points of operation in the course of a few days, when our speed of driving will be considerably increased. In the cross-cuts north and south at the 60 west, on the Middle lode, the ground is without alteration. The distance driven north in the past week is 1 fm. 2 ft. 6 in., and south 2 fms. In the 60 east on the Cape lode, the lode is 1 to 1½ ft. wide, composed of capel and quartz, with small quantities of munda and copper ore.

DRAKEWALLS UNITED.—M. Bowden, Dec. 14: Setting Report: We have the following bargains and pitches now at work:—The deep adit level to drive west of engine-shaft (by aid of rock-drills), by six men, at 4l. 10s. per fathom. The same level to drive east of Brenton's shaft, by six men, at 6l. 10s. per fathom. The distance done in this adit during the last four weeks is 15 ft. 2 in., and we hope to make the communication in about 10 weeks from this time, and when the adit is completed, as we have before, the bulk, if not the whole, of the surface water throughout the mine will be discharged into the River Tamar without cost to the company, and immediately this is done we shall proceed to drain the mine below the said deep adit level to the 102, or bottom. The south branches on which the deep adit is being driven are producing saving work for tin. The rise in back of the 40, west of engine-shaft, has been put up during the last four weeks 5 fms. 5 ft. 6 in.; reset to four men, at 3l. 10s. per fathom. On communicating this rise to the 20 a good section of ground will be laid open, and which we shall be able to stope from the bottom of the 20 at much greater advantage to the company than from the back of the 40. The 20 to drive west, by six men, at 6l. per fathom, to meet the rise coming up in the back of the 40, the branches producing saving work for tin. One stope in back of this level, to six men, at 3l. per fathom. One stope in the back of the adit, west of engine-shaft, to four men, at 2l. 10s. All the stope are yielding fair stamping work for tin. We are also driving the deep adit level, east of Mathew's shaft, by two men, at 7l. per fathom; the branches here are producing good stamping work. 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and snow, but the carpenters are pushing on with the new work for slime-floors and so forth as fast as possible.

LLANDEGLA.—H. Hotchkiss, Dec. 13: New Shaft: The only change we have here is a slight decrease in the flow of water, the rock is becoming a little stronger, the lode is the same in size and character. Our lift works well and answers our purpose admirably. Sinks falling heavily to-day.

MARKE VALLEY.—Wm. George, Francis Reuils, Dec. 13: Setting Report: To drive the 90 west, on Rosedown lode, by six men, at 87. per fathom, where it is about 2 ft. wide, of such a promising character as leads us to hope for an early improvement. No. 1 stope, in the bottom of this level, is set to eight men, at 41. 10s., where the lode will yield 2½ tons of ore per fathom. No. 2 stope to six men, at 31. 15s., yielding 3 tons per fathom; and No. 3 stope to four men, at 42. 5s., yielding 2 tons per fathom. We have two stopes in the back of this level, each set to six men, at 44. and 45. and yielding 2½ tons per fathom. To drive the 80 east of No. 1 rise, by four men, at 87. per fathom; the lode is fully 2½ ft. wide, producing good quality ore, saving work, and judging from the lode in the back of the 90, a little to the east, we expect soon to get an improvement. To drive the 80 cross-cut south from the top or No. 1 rise, by six men, at 122. per fathom. This still continues a very important point, and is being urged on as fast as possible. We have set nine pitches to 27 men, at tributes varying from 8s. to 13s. 4d. in 16.—Wheeler Jenkins: The shaftmen have not yet completed their bargain, but we are glad to say they continue to make good progress, having sunk during the past month 5 fms.; ground still very favourable.

WELLANEAR COPPER.—J. Gilbert, Dec. 13: The ground in the 30 cross-cut south of Gundry's shaft, is harder for driving, and letting out a little more water, but the men are still making very good progress. The 70 cross-cut, north of the main lode, is going through a mineralised channel of ground, which is looking favourable for the production of copper ore. The lode in the 90, driving west of Gundry's shaft, on the south part, is 5 feet wide, and yielding 2½ tons of ore per fathom. The lode in the 100, west of shaft, is 5 ft. wide, yielding 2 tons of ore per fathom, and looking very promising for further improvement; the ground is also better for driving, and letting out an increased quantity of water. In the 110, east of shaft, the lode is 4 ft. wide, yielding 1½ ton of ore per fathom. The rise in the back of this level is yielding 1 ton of ore per fathom. The lode in 110, west of shaft, is 4 ft. wide, composed of spar and mudiic, and is also yielding 1½ ton of copper ore per fathom. In the 120, east of shaft, the lode is 5 ft. wide, yielding 2 tons of good quality ore per fathom, and presenting a very promising appearance. The rise in the back of this level is yielding 1 ton of ore per fathom. In the 90, east from the old engine-shaft, the lode is 3 ft. wide, and yielding some saving work for copper ore. The lode in the 110, east of shaft, is 1½ ft. wide, and unproductive, but the ground is easy for driving. In the 130, west of shaft, the lode is 11 ft. wide, well-defined, and letting out a good deal of water, and we are expecting to meet with an improvement for tin very soon. The stopes and pitches throughout the mine are just the same as when last reported. We estimate our next sampling to be about 600 tons of copper ore.

MID-DEVON COPPER.—James Nell, Dec. 9: In a shaft pumping machinery has been stopped for a few hours for slight repairs, and water is now 3 fms. below the 70. The 45 stope, increasing, requiring 4½ revolutions of wheel to cope with it.—G. Shaft: The 45 stope, east of shaft, worked by eight men, and one boy, is still same character of strata for yield of ore. We have intersected an oblique fissure in eastern part of stope which emits a foul gas; when atmosphere at surface is murky it affects ventilation, and occasionally so much so that men cannot work near it. I then employed them driving a cross-cut north from bottom of 45, where the stratum is congenial, and should, as it is extended, intersect the same run of strata that has been so productive at the stope above. It is at present yielding small nests of ore of good quality. Ore raised this week 15 cwt. The 50 east, driven by six men, 5 ft., the strata chiefly composed of capel, garnet, hornblende, with yellow ore, and occasionally in saving quantities of mica and talc. It is a very promising drive, and the indications are such that I expect on the eastern side of next cross-course, which cannot be far distant, to see it materially improve.—Surface, Rock-Drill, Wheel Pit: Masons have not worked since Wednesday, owing to heavy snowstorms, with sharp frosts. All other work proceeding as fast as weather will permit.

MONA.—T. F. Evans, Dec. 11, in concluding a detailed report on the operations at the mine says:—The mine and smelting works are well stocked with all the materials necessary to carry on operations throughout the winter, and all the heavy works which we undertook when the company was formed have now been completed. All is in perfect order, and the mine is at last well laid out for a systematic method of raising a regular monthly quantity of ore.

MOUNT CARBIS.—Geo. Johns, Dec. 14: The lode in the 50 west end continues worth quite 50s. per fathom, and is being driven by 10 men. The lode in the rise above back of this level is worth 50s. per fathom, and is being risen by four men. We are improving the ventilation with the view of employing a larger number of hands at the above point. There are no other changes to report.

NEW CARADON.—N. Richards, Dec. 13: The adit level, which is over 120 fathoms in length, has been so far cleared as to admit of my going through and examine nearly all the lodes and branches laid open by former workers. No. 1 branch is about 5 in. wide, and from which we broke some good stones of yellow copper ore. No. 2 and 3 lodes have been driven on a little both east and west; but those I could not examine, being filled in with attle. No. 4 lode has been wrought on more extensively, a shaft having been sunk on same from surface, to that depth I am at present not prepared to say, but I find this lode has been driven on at this level, west of shaft, about 45 or 50 fathoms, where a winze was sunk to the next or 15 fathom level, and from about this point a good parcel of copper ore was broken and sold. The eastern level has been driven east of shaft about 11 fathoms; the lode in which is 3 ft. wide, composed of quartz, peach, and spotted with mudiic and yellow copper ore—a very promising looking lode, and should be driven as soon as convenient.

NEW TERRAS.—T. R. Pryor, Dec. 14: Since my last report we have holed from the adit to the engine-shaft, and also commenced cutting plat, which we shall complete in a few weeks, meanwhile shall be laying down tramroad through the adit to the winze.

NEW TRUMPET CONSOLS.—R. Quentrell and Son, Dec. 14: We are sinking Trevelick shaft, by nine men, as fast as possible, and as the ground is favourable they are getting on very well; the lode is producing rich tin stuff, and is getting to be very much of the same character as it was in the deeper levels, where it was so productive in the late working.—South Lode: The ground in the adit end east is a little harder, but the lode is rich for tin. We have also a branch cut in the adit, which is only 4 ft. wide, and a little before the adit end. Our prospects are very encouraging.

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NEW WEST CARADON.—N. Richards, Dec. 13: A rise in the back of the 30, on the main lode, will yield from 1 to 1½ ton of copper ore per fathom. A winze sinking below the 55 on this lode will yield 1 ton of ore per fathom. The counter lode at this level is at present yielding saving work for copper. There is a change to notice in the 33 cross-cut south of Hallett's shaft. The lode in which we are driving east at this level is improved; it is 15 in. wide, and will now yield about 1 ton of good ore per fathom.

NEW WHEAT TOLLAUS.—T. Hodge, Dec. 13: We cannot speak of any alteration in connection with our operations here. The cross-cut driving north at the adit level is being pushed on with all speed; and we hope to report of a good discovery at an early date.

NORTH HERODSFORD.—T. Trelease, Dec. 14: We have commenced to sink a winze in the bottom of the 80 this week, which I have set to two men at 6s. per fathom. The lode is about 1 ft. wide, and is worth 6 cwt. of ore per fathom. We have not taken down any lode in the 117 and since I reported it last week at 5 cwt. per fathom, the lode is about 45 or 50 fathoms, where a winze was sunk to the next or 15 fathom level, and from about this point a good parcel of copper ore was broken and sold. The eastern level has been driven east of shaft about 11 fathoms; the lode in which is 3 ft. wide, composed of quartz, peach, and spotted with mudiic and yellow copper ore—a very promising looking lode, and should be driven as soon as convenient.

NORTH TREKERRY.—Pryor and Son, Dec. 14: The ground in the deep adit cross-cut, north of Scorrer Consols engine-shaft, is a little easier for progress, and the end letting out water freely as if nearing a lode or branch; we set it at our last pay again to six men and one labourer to drive at 2s. 6d. per fathom for the month, the men to fill in and land their own debris, the driving of which has been pushed on with all possible speed to reach the great flat tin and other lodes. The former has been pushed on for about 45 or 50 fathoms, where a winze was sunk to the next or 15 fathom level, and from about this point a good parcel of copper ore was broken and sold. The eastern level has been driven east of shaft about 11 fathoms; the lode in which is 3 ft. wide, composed of quartz, peach, and spotted with mudiic and yellow copper ore—a very promising looking lode, and should be driven as soon as convenient.

OREL TOR.—H. Bulford, J. Rhodia, Dec. 14: Rapid progress is being made at the new shaft east, and the cutting of the plat at the 65 will be finished next week. The lode in the 50 east is producing a good deal of sulphur, mudiic, and good stones of copper ore, and is looking very promising for improvement. The lode in the stope in the bottom of the 50 is looking well for arsenical ore, and is also producing good stones of copper ore. The stope in the back of the 50 are looking just the same as for some time past, producing 3 tons of arsenical ore per fathom. Nothing fresh in the western part of the mine.

OLD SHEPHERDS.—R. and J. Nancarrow, Dec. 11: Fortnightly Report: South Mine: We are glad to say good progress is being made in forcing the water to a depth of about 60 fms. below the adit, where there appears to be a choke, possibly through some of the old timber being thrown across the shaft, and to facilitate the clearing of this stuff we have erected a portable engine, which is now ready to work. Here at this depth we have to cut bearer-holes and a set of bearers to carry the lift, which will occupy a few days. At the old sump shaft the men are now engaged dividing, casing, and fixing roadway, preparatory to clearing for a deeper level, and while this is being done a new winze will be erected.—Treague's Shaft: At the 44 the men are engaged clearing, where we hope shortly to reach the lode. We are also clearing the 34 and 26, where we find the hard part of the lode left standing, which we consider worth 2½ cwt. per fathom, and as depth is attained doubtless it will be steadily increase in value, and can now be stope at 3s. per fm. This is quite sufficient to warrant the fulfilment of our expectations, on which our earliest reports were based. The engine is making good progress in erecting the winding-engine. The same remark may be applied to the buildings in the western ground. The dressing machinery is doing just as usual.

PARKY COPPER CORPORATION.—T. Mitchell, Dec. 13: I am pleased to inform you the lode in the 65 east of cross-course has further improved this week, and is at present worth 3 tons of copper ore, per fathom; likely to further improve; some of the ore is of good quality. It is the best-looking end that I have seen for a long time, and we have every reason to hope for a large bunch of ore in this direction. The trial in the western ground has been hindered for some little time on account of the water; the lode at this point has a promising appearance, with a branch of good copper ore about 16 in. wide.

T. Mitchell, Dec. 14: The 65 east has further improved since yesterday. The ore part of the lode is opening out wider and richer, and presenting a very pretty appearance.

PATERSYKE AND CLARGILL HEAD.—John Peart, Dec. 3: Top Level: The adit end is not much changed. We still have a little ore and plenty of vein. We have not been working much at this point during the last month. The north end still continues poor, but there are indications of a change; more

mineral putting in the vein and pieces of ore.—Low Level: We have got up to the rise foot under the old climbing-way shaft, having taken out the arch and put in new where it was required, and repaired the other arch up to this point. I expect 4 or 5 fms. more will put us into open ground, but will save very little to put in tin good ore, so that now we are in a fair way for getting shortly to the forehead. During the last two weeks we have cleared out and put into good working order 18 fms. of level.

PENHALLS.—S. Bennetts, J. Goyne, Dec. 13: The lode in the 70 east end is without much change, is producing some tin stuff, but not to value. In the 60 cross-cut north there is no further lode cut as yet. The 60 east end, on the south section of the lode, is worth 3s. per fathom, and the west end on the same part 5s. per fathom. On the Balldu lode the 40 west end is worth 6s. per fathom, and the winze below the 30 is at present poor.

PENXANE.—Dec. 15: Our various openings continue to show improvement, and there is greater activity in the deliveries of stuff to market.

PEN-YR-ORSEDD.—R. Prince, Dec. 15: The water is drawing away from the bottom of the shaft, so I am looking forward to proving what the men have lately cut into in sinking. We find after careful dialling that the Halkin tunnel will come underneath our shaft below the 170, so that we shall have a very large stope of ground that we can work away on the course of the lode. Fair progress is being made in the extension of this tunnel, and any day we may be enabled to operate to the d-ph mentioned, when there can be no doubt we shall have a very important mine in the deliveries of stuff to market.

PERRAN SILVER-LEAD CONSOLS.—Edward Moyle, Wm. Niness, Dec. 14: The total depth of Phoenix shaft below the 60 is 11 fms. 5 ft. 10 in.; the lode is the full width of the shaft—5 ft. 6 in.—the eastern part of which is chiefly composed of hard quartz. The western side, or the footwall, for 2 ft. wide is more compact, and producing splendid stones of rich silver-lead. There is no doubt from the present appearance of the lode in the bottom of the shaft that Phoenix is the champion lode of the district, and from which far better results than we have yet had may be anticipated. The 60 end south is driven from shaft 31 fms. The portion of the lode we are taking with us is 2 ft. wide, and consists of nice looking soft quartz, prlan, and a branch of rich silver-lead; the ground is easy and cheap for driving, as will be seen by our setting, and everything about the lode indicates a great improvement in its value. The easy nature of the ground will enable us to push on rapidly to the junction of the caunter, where, as we have before stated, we expect a large deposit of lead. The winze below the 60, north of shaft, is down 5 fms. 1 ft. 7 in.; the lode is 4 ft. wide, of quartz, prlan, and silver-lead, the greater portion of which is saving work for lead. The water here continues to increase, and we fear it will soon compel us to suspend operations for a time. The rise above the 60, north of shaft, is up 4 fms. 2 ft. 4 in. in the slide; in about 4 fms. more we shall communicate with the winze below the 50, which we hope to accomplish this month, when we shall have good ventilation, and be able to resume driving the 60 north. The progress made in the various points of operation for the four weeks ending 9th inst. are as follows:—Phoenix shaft sunk 4 ft. 6 in.; the 60 end south driven 4 fms. 4 ft., re-set to same men, for one month, at 4s. 15s. per fathom; winze below the 60 sunk 4 fms. 7 in., re-set to same men for one month at 6s. per fathom; rise above the 60 sunk 5 fms., re-set to two men, for four men, if required, at 3s. 5s. per fathom. The total ground cut in the three named places by 14 men is 11 fms. 4 ft. 7 in.; total ground, including shaft, 12 fms. 3 ft. 1 in. The three bargains are re-set at an average price of 4s. 13s. 4d. per fathom. We have secured the new boiler fuse, and uncovered the old boiler, which we intend to pull out this week.

POLROSE.—W. Bennetts, Dec. 13: Since my last report we have fixed and made good a standing lift at the 80. This was set to work yesterday, and is covering well. We have now to cut a little more ground for bearers at the 80, this and fixing the bearers will be finished in a day or two, and I hope by Friday to commence dropping the lift below the 80. Everything so far has gone on satisfactorily since we began to fork below the 70.

PRINCE OF WALES.—S. Robert, Dec. 12: The lode in the 102 east is 3 ft. wide, composed principally of capel and spar, and worth 8s. per fathom for tin, with very good stones of copper ore; the men are now driving by the side of the lode. In the rise in the back of this end the ground is a little better for rising, consequently better progress is being made. There is no change in the progress north at the 102 west. I have to-day put the men to drive south to ascertain if the lode is gone in the direction before we drive further north. The lode in the 90 west is still disordered, being altogether 2 ft. wide, composed of capel, spar, kilar, and a little copper, and from it water flows very freely. In the stope in the back of this level the lode is worth 3s. per fathom for tin and copper. The lode in the stope in the back of the 90 east is 3 ft. wide, worth 10s. per fathom for tin, with occasional stones of copper ore. No change in the 77 cross-cut south.—Goodluck: Stope in back of the 23, lode 4 ft. wide, worth 6s. per fathom for tin.

ROMAN GRAVELS.—A. Waters and Son, Dec. 14: We have been underground here to-day with a gentleman who is a shareholder, and who came to inspect the mine for a friend, who is also a shareholder in the company; this being so, we have to state that the mine has not looked better for a long time, and to go into details would only be repeating to the shareholders what we have said over and over again. The pumping engines as well as those for winding and crushing are being kept going regularly, but owing to frost and a great depth of snow dressing operations are much delayed. The whole country about the mine is covered with snow 14 in. deep.

RUSSELL UNITED.—J. Bray, Dec. 3: The lode in the 57 west has very much improved since yesterday, producing large stones of rich yellow copper ore.

—J. Bray, Dec. 3: I am now up from the 97, and am very pleased to say the lode in the western end is worth full 5s. per fathom for copper ore, and very likely to improve. At present we have a fine looking lode.

—J. Bray, Dec. 14: The lode in the 97, west of cross-cut, is 5 ft. wide, worth for copper 7s., and likely to improve. The lode in the eastern drive at this level is 4 ft. wide, beautifully spotted with copper and mudiic—a very kindly ore. Since my last report we have continued much the same as last reported. **SILVER HILL.**—G. Rickard, Dec. 14: Our efforts in extending the tunnel level cross-cut north have not as yet been rewarded by the cutting of the lode, but we may do so any day. The ground continues all that can be desired for the production of mineral, being a beautiful-looking clay-slate, mixed with prlan and friable spar, with patches of mudiic and copper ore. Water still continues to flow in large quantities from the bottom part of the forebreast, and very likely it will continue until the lode is reached.

SOUTH CONDURROW.—Wm. Rich, Wm. Williams, K. King, Dec. 13: Good progress is being made in enlarging Marshall's shaft below the 75. The 66 end west is worth 8s. per fathom, and the stope in the back of this level is worth 3s. per fathom. The 54 end west is worth 7s. per fathom, and the stope east of shaft is worth 8s. per fathom. The 42 end west is unproductive. The 30 end, west of engine-shaft, on the flat lode, is worth 7s. per fathom. The stope in the back of this level is worth 20s. per fathom. The 30 end east is improving, and now saving work for tin. The 40 end east is worth 9s. per fathom. The 50, east of King's shaft, has a promising appearance. The stope in the back of this level is worth 13s. per fathom. The 60 end east is worth 15s. per fathom, and the stope behind the end is worth 15s. per fathom. We have holed the winze below the 70, and have resumed the driving of the 70 end east in a kindly lode. The 80 end east is worth 12s. per fathom, and the stope in the back of this level is worth 15s. per fathom. We are cutting through the lode in the 93 east of shaft. So far as yet seen the lode is without tin to value.

SOUTH DARREN.—H. James, Dec. 14: We have not been able to do much in the 130 this week, owing to a stall breaking in the old workings at the 3½, close to Bishop's shaft, which stopped the men from driving until last night; the drawing is being done on regularly. In the 122 east the lode is worth 2 tons of silver-lead ore per fathom. In the same level west the lode is worth 2 tons of silver-lead ore per fathom. This week we have had very severe weather, heavy falls of snow and hard frost, which has impeded our surface work, but we have managed to keep the water-wheels working and a part of the dressing going. The 45 tons of silver-lead ore sold on the 8th inst. realised 632s. 5s.

SOUTH DEVON UNITED.—Wm. Hooper, Dec. 14: The lode in the 110, east of cross-course-shaft, is further 3 ft. wide, with a value of 10s. per fathom, and every appearance of a further improvement, as the water has not abated 1 in. in the 100. We think it advisable, after driving 3 to 4 fms. further in the above direction, to put up a rise in the back of this level, when no doubt we shall lay open a valuable piece of ground for stoping. The stope in the back of this level are worth as follows:—No. 1, 6s.; No. 2, 3s.; No. 3, 8s.; and No. 4, 8s. The stope in the back of the 110 and 100, west of Brook shaft, are worth—No. 1, 9s., and No. 2, 6s. per fathom. In the stope in the back of the 100, east of Brook shaft, the lode is 4 ft. wide; worth 8s. per fathom. The lode in the back of the 100, east of Brook shaft, is 4 to 5 ft. wide, producing good stones of ore, and every indication of still improving. The stope in the back of the 80, east of Brook shaft, is 4 to 5 ft. wide; worth 9s. per fathom. There is no change in the appearance or size of the lode at the adit level, west of old sump shaft, since last reported on; still presenting its very promising character. In Martin's shaft the men are doing good duty in squaring down the shaft. Immediately this is completed we shall at once commence to make the rise the same size as the above to the 100, where we first commenced to rise. The communication here is most satisfactory. In Pick-stone's shaft the lode at the 15s. as far as seen (5 ft.), is composed principally of spar, with spots of both mudiic and copper ore. On Monday last the men cut a large increase of water, which for the time more than we could deal with, and rose several fathoms in the shaft, but am pleased to say we have again the water drained to the bottom, and the men resuming the driving of the cross cut through the lode, which has every appearance of being large.

SOUTH TOLCARNE.—Thomas Angove, Samuel Arthur, Dec. 13: The sumpmen are at present employed in cutting plat at the 70. The 70 end west lode is worth 10s. per fathom. The 70 end east lode is worth 10s. per fathom. In the 60 end east the men are presently driving shaft to prove a south part, which took off from the lode some 5 fms. behind the present end. In the stope in the back of the 60 west on the Nos. 1 and 2 the lode is large; worth 9s. per fm. each. In the 50 end east we shall resume driving shortly, as the ventilation from the winze behind this end will enable us to do so. In the 50 end west the lode is large (about 6 ft. wide), and worth 9s. per fathom. The ground from the 20 to the adit is nearly communicated, which will ventilate the mine thoroughly. In Taylor's bottom the lode is looking well; worth 30s. per fathom. We hope to have the lode pushed on to the stamps fully at work in a few weeks. The setting of the calender has been almost suspended during the last week or 10 days from the inclement weather.

TANKERVILLE GREAT CONSOLS.—Arthur Waters, Dec. 14: Tankerville Mine: The various points now under operation here are yielding ore fully up to the values given in our report of last week.—Pennerley Mine: Warm Water Lode: The 120 east of cross-cut shows a vein 1 ft. wide, worth ½ ton of lead ore per fathom. The stope in back of this level, west of the cross-cut, is worth 1 ton per fathom. The lode in the 80, west of the said cross-cut, is 6 ft. wide, and worth quite 4 tons per fathom. The two stopes in back of this level are together worth 4½ tons per fathom, and the two stopes in bottom of ditto, together worth 2½ tons per fathom. The remaining points here are without change since last reported on.—Potter's Pit: The shaft is now about 3 fms. below the 91 ft. level—men making fair progress. The stope in back of the 105 ft. level is producing good ore stuff. The water is now within 19 ft. of this level.—Bog Mine: We have dropped the lift here this week 2½ ft., ground favourable for progress. We are pushing on with the clearing of the 175 east end of shaft, on the various lodes, laying down tramway as we go. The 103, east of junction, is cleared and secured, with tramway laid up to the forebreast. We are driving this end, the present value of the lode being 13 cwt. of lead ore per fathom. All the other points and pitches yielding lead ore and blende up to the value given in last week's report. All our dressing floors are at present snowed up.

TREVAUNANCE UNITED.—Wm. Vivian, Dec. 14: In the cross-cut driving south at the 55 we are meeting with branches of mudiic; this indicates our

near approach to the lode. I would call attention to the fact that at West Kitty Mine we had similar results as we now have at this mine—a great course of mudiic before we came on the rich course of tin that we now have in this adit. I consider our prospects at this mine are of more than an ordinary character.

TREVAUNANCE UNITED.—W. Hooper, T. Job, Dec. 13: Since last reported the shaftmen have driven south on Neil's lode at the 20, about 3 fms. 2 ft.; the lode has been disordered by a capel, and is now worth 3s. 10s. per fathom. We hope in the course of another 6 ft. driving to get through this capel, when we have every reason to believe the end will maintain its former value, as the strata of ground is as formerly. The north end at this level has been driven about 9 ft. by two men, and the lode is now worth 3s. 10s. per fathom. We intend pushing this end with full staff of men as fast as possible, to intersect the east end of west lode, which we anticipate intersecting from the present end. About 15 or 20 fathoms further at this point we expect to meet with a grand discovery.—South Level: No. 1 stope is worked out. Nos. 2, 3, 4, and 5 are still maintaining their value, as last reported. We have set another stope on tribute at 9s. 6d. in 17. standard, as usual.—North Level: No alteration to report on since our last. At the 10 the south end is worth 2s. 10s. per fathom. No. 2 stope is worth 2s., and No. 5 2s. 15s. per fathom. We are getting on with the erection of our winding engine as fast as possible. We shall have a parcel of tin ready for market this week. Other work progressing satisfactorily.

TREMBLO.—E. Chagwin, Dec. 13: The 16 ft. level cross-cut driving south towards Trembo lode from engine-shaft, also the cutting of plat and fixing of braces, &c., at the level, are being proceeded with with all speed. The adit level driving east of Pennick's shaft has been driven since passing cross-course about 2 fms. direct east in splendid kilar ground. We have commenced this morning to drive north in search of the main lode, which I think is very near, judging from the present appearance of this end. The winze sinking below the adit level in Trembo lode; the lode is 3 ft. wide, and worth for tin about 12s. per fathom. The New South lode, 13 fms. west of cross-course, driving south west from Trembo lode, is 2 ft. wide, and worth for tin about 15s. per fathom. The engineers are in a forward state with the erection of the 60 in. pumping engine.

WEST CARADON.—N. Richards, Dec. 13: A stope in the back of the 50 on Vivian's lode will yield 1 ton of copper ore per fathom. A rise in the back of the 33 on this lode will yield 2½ tons of ore per fathom. Taylor's lode in the rise in the back of this level will yield 1½ ton of copper ore per fathom. Gilpin's lode in the adit level, together with the rise and stope in the back of the same, will yield 5 tons of copper ore per fathom. On Monday last we commenced sinking a winze in the bottom of this level, the lode in which will yield 2½ tons of ore per fathom. We shall not be in a position to do much on this lode for a few days, having to cut ground for hanging-tackle, &c. The lode in the adit level in the western Gonamena is 4 ft. wide, spotted with mudiic. Fair progress is being made in clearing the adit level in Dawe's Land towards Popes lode.

WEST OREBOR.—John Andrews, Dec. 11: The shaftmen have been engaged during the last two or three days in taking down the lode, which has fallen off since last reported, although it maintains its size, 3 ft. wide, but this slight falling off in the value of the lode I regard as temporary, as the last hole or two blasted into it shows a decided improvement, and in a few feet further sinking I hope and expect to see a further improvement. The lode in the 50 west is still looking very encouraging, and is worth 6s. to 7s. per fathom. This end we are now driving at 3s. 10s. per fathom, and we could stope the back for 30s. per fathom, which would leave a splendid profit.

WEST OREBOR.—John Andrews, Dec. 13: The lode in the engine-shaft, sinking below the 50, is 3 ft. wide, composed of quartz, capel, mudiic, and good stones of copper ore, but at the present time not enough to value. The lode in the 50 west is 2 ft. wide, and is worth 6s. per fathom.

WEST DEVON GREAT CONSOLS.—George Rowe, Dec. 14: Weekly report not received, but telegram as follows: Lode in end will be taken down to-night, shaft in regular course of sinking, ground good, lode doing well.

WEST GODOLPHIN.—T. Hodge, Francis Hodge, Dec. 14: The winze below the 70 west is communicated with the 80, which has well ventilated the workings in this part of the mine. We have not yet intersected the lode in Cock's shaft, but expecting to do so daily. In the other bargains there is no change worth reporting.

WEST KITTY.—Wm. Vivian, Dec. 14: In the 80 driving east the lode is very much improved at this point, worth 10s. per fathom. This is our bottom level on the course of the lode. As I stated at the meeting, we are driving a cross-cut to intersect the lode 30 fms. below our present workings on the course of the lode. In the 72 driving east the lode is worth 12s. per fathom. In the 60, driving west of cross-cut, the lode is worth 9s. per fathom. Driving east of cross-cut the lode is worth 10s. per fathom. No change to notice in the stope since last reported.

WEST LISBURN.—Dec. 13: On account of the severe weather our progress has been slow in draining the mine, the wheel having been stopped on several occasions. The men have cleared the debris from the cross-cut to the new lode, and have commenced to drive the same.

WEST VOR AND LEEDS.—S. Harris, Dec. 13: The adit level driving east towards the great flookan is progressing satisfactorily. The lode still continues the same size, producing tin throughout. It is large and well defined, and it explored in depth will sure to be a success.

WEST WHEAT TOLLAUS.—T. Hodge, Dec. 13: Having put in the cage road and divided and cased the shaft from the 48 to the 60, we have again resumed the sinking of the shaft below the 60. The main winze to sink below the 60 at 10s. per fathom; lode large, worth 12s. per fathom. The 60 to drive west at 6s. 10s.; lode worth 10s. per fathom. The lode for the whole drive in this level has been very regular in size, and we are daily expecting an improvement in the end. The winze to sink in the bottom of the 48 west at 6s. 10s. per fathom; lode worth 10s. per fathom. The cross-cut to drive north in the cross-course for the lode west of same at the 48 is being driven with good speed, and the 15 fms. certain that was set to the men will be completed this month, leaving only about 7 fms. more to drive for the lode. We feel assured we shall meet with a productive lode at this point. Cross-cut to drive north at the 48 for the middle lode at 5s. 15s. per fathom. The 36 to drive west of cross-course on main lode at 6s. per fathom; lode from 3 to 4 ft. wide, producing stamping work for tin. Cross-cut to drive south and west of cross-course at the 36 west for the purpose of cutting Wheat Diamond lode at 7s. per fathom. We consider this a good point, and have every reason for supposing good results will follow our drive. Four stopes were also set on atwork at prices varying from 2s. 10s. to 4s. 5s. per fathom; lode worth on an average about 10s. per fathom. We add a parcel of tin last week, and are getting another ready for sale as fast as possible.

WEST WHEAT TOLLAUS.—John Gilbert, Dec. 14: In the 105, driving west of Richard's shaft, the lode is 3 ft. wide, and yielding some saving work for copper ore, but the ground is a little more spare for driving. The lode in the rise, in back of this level, west of shaft, is 4 ft. wide, and yielding 2 tons of ore per fathom. No. 1 stope in the back of this level is yielding 4½ tons of ore per fathom, and No. 2 stope is yielding 3½ tons of ore per fathom. We have commenced the No. 3 rise in the back of the 33 to the 85; we shall sink three men to prepare the pitwork for sinking in the bottom of the 105. We have intersected some small branches of spar in the cross-cut driving north at the 85, west of shaft, but we expect by continuing it a little further to meet with another part of the lode. The water in the mine has increased very much during the past month, but all our machinery is in good working order and able to cope with it.

WHEAT OREBOR.—H. Phillips, P. D. Holman, Dec. 12: We have resumed the sinking of the 130 cross-cut south, which will force us to sink men. We have commenced to drive the 132, east of No. 2 winze, by six men also. There is no change in the lode since last reported. The lode in the 132, driving west of new shaft, has improved since last reported, being now 6 ft. wide, and showing a very masterly appearance to the value of 25s. per fm.; this is a very important point in the bottom of the mine. We have commenced to cross-cut south at the bottom of the 108, east of new shaft; there is nothing at present to call for any remark at this point. The stope in the back of the 108, east of rise, is worth 20s. per fathom. The stope in the back of the 108, east of new shaft, is worth 15s. per fathom. The stope in the back of the 98, east of new shaft, is worth 10s. per fathom. The stope in the back of the 48, east of new shaft, is worth 20s. per fathom. There is no change in any other part of the mine.

WHEAT OREBOR.—H. Phillips, Dec. 14: The lode in the 132 west is still improving in size and value, now worth 30s. per fathom. With this in view we purpose placing eight men to sink the new shaft 9 ft. deeper before we can complete our drawing arrangements. To accomplish this work we intend taking two men from the 132 east, as it is very important that this should be done without delay.

WHEAT GRENVILLE.—T. Hodge, Dec. 14: Good's shaft is going down with fair speed; it is below the 130 nearly 9 fms. Other places going on regular, but I see no change as to valuation worthy of any notice since my last.

WHEAT HONY AND TRELAUNY.—Wm. Hancock, John Pearce, Hubert Leatham, Dec. 12: Smith's shaftmen are busy engaged in connecting the new balance-bob at the 55, and we hope to complete it and get the engine at work to-morrow

other points of operation are the same as in last report. The rock-drill it is expected will be at work in a few days.

Drakeville, $\frac{3}{4}$ to $\frac{1}{2}$; the managers report that good progress is being made with the rock-drills, the deep adit level having been driven during the past four weeks about 15 fathoms. It is expected that about 20 tons of tin will be ready for market by the end of next week.

Kit Hill, $\frac{3}{4}$ to $\frac{1}{2}$; the lode in Griffin's winze in the bottom of the 62 fm. level west is from 2 to 3 ft. wide, showing some good stones of tin and a little copper ore, and in the 62 east the lode is of a very promising character. Fair progress is being made in driving the main tunnel, the ground of which has become harder.

South Devon United, $\frac{3}{4}$ to 1; in the 90 and 110 fm. levels, east of Brook's shaft, the lodes are about 4 ft. wide, yielding good stones of ore, with every indication of a further improvement. Good progress has been made at Martin's shaft, and in cutting the lode at the 155 at Pickston's shaft, which has every appearance of being a large one.

West Kitty, $\frac{1}{2}$ to $\frac{3}{4}$; these shares are said to have been firm, and it is reported that tin has been cut in the deepest part of the mine—at the 80 (formerly called the 90)—the present value is 10 $\frac{1}{2}$ per fm., and improving. This is considered important for Trevaunance, without mentioning the discovery at Wheal Coates, which lode it is thought goes into Trevaunance.

West Polbreen, $\frac{3}{4}$ to 1; a correspondent writes that in these shares there have been numerous transactions, and that the tendency is decidedly upward.

Wheal Coates, $\frac{3}{4}$ to 1; it is stated that the discovery reported in last week's Journal has assumed increased importance, and that the lode is now worth 20 $\frac{1}{2}$ per fathom. The shares have been in demand.

East Caradon, $\frac{1}{2}$ to $\frac{3}{4}$; it is stated that more branches or veins continue to be met with in the 130 cross-cut south, all which indications are favourable for a rich lode being met with in this point. The lode in the 90 end, and rise in back of level, hold in productiveness, and are looking well for further improvement. There is no particular change in any of the other bargains. The sampling of copper ore last week computed at 53 tons, is to be sold on Thursday next.

The Nenthead and Tynedale Lead and Zinc Company, with a capital of 120,000 $\frac{1}{2}$, in shares of 1 $\frac{1}{2}$ each, has been formed for the purpose of acquiring all the freehold and leasehold property, mines of lead ore and zinc ore, crushing, dressing, and other machinery, and smelting mills, situated in the valleys of the Tyne and Nent, and hitherto owned and worked by the London Lead Company and by the Tindale Spelter Company. The prospectus (which will be found in another column) states the mines and mining property of the company are of the most extensive character, covering an area of nearly 13 square miles, and comprising some of the richest mining ground ever worked in the United Kingdom. Of this three square miles are freehold, and the remainder leasehold. There are 51 important veins and branches, besides others of less value. From 21 of these ores of lead and zinc are being raised; in six veins work of exploration and development is carried on. There is thus the certainty of a steady yield of ore. From the work already done it is seen that there will be a further increase during the current year. There are 163 men raising ore, and 26 employed in exploration and development. The reserves, as set forth in the report of Mr. Bewick, are computed at 12,000 to 15,000 tons of lead ore, and 40,000 tons of zinc ore. The ore is cheaply extracted, for there are 43 miles of levels (of which 35 miles are laid with iron rails), and these effectively drain the mines, and by them the mineral is brought to the day and direct to the various dressing-floors. There is thus no cost for pumping nor for lifting the ore from shafts. This extensive system of levels, besides securing the cheap extraction of the ore gives easy access to a great extent of valuable mining ground in which new developments and exploring works are being advantageously carried forward.

West Wheal Rose, with a capital of 50,000 $\frac{1}{2}$, in shares of 1 $\frac{1}{2}$ each, has been formed to develop a valuable mining property at Newlyn East, in Cornwall, and within the limits of which the principal lodes of the Shepherds Mines form their junction with each other, and with the east and west lodes of East Wheal Rose and Wheal Albert. The prospectus states that the value of the ore ground from surface to a depth of 150 fms. on the Hart's and one of the north and south lodes alone, is estimated by Mr. Symons, the well-known surveyor, at 1,900,000 $\frac{1}{2}$. Basing the calculations on this estimate, and allowing the whole term of the lease (21 years) for working down, at a cost of 50 per cent. of the returns, to the 150 fm. level, an average profit of over 40,000 $\frac{1}{2}$ per annum is shown from working two lodes only, and there is every reason to believe the other lodes will prove equally rich.

Richmond, $\frac{3}{4}$ to 1; the week's run was \$13,000, from 323 tons of ore, with No. 4 furnace. During the week the refinery produced doré bars to the value of \$12,000. The superintendent's weekly report to Nov. 20 states that the 300 rise from south-west drift from station has been risen 30 ft. on fissure in limestone, with seams of ledge matter and low-grade ore. The 300 winze from north-east drift from south-east drift has been sunk 8 ft. on fissure, with favourable indications, pinched out in hard limestone. The 700 north-east drift from main west drift has been run 19 ft.; total, 71 ft. In compact, favourable limestone. The 700 south-west drift from main west drift has been run 19 ft. in favourable limestone, commencing at a point 42 ft. east from main winze to the 800 level. The 700 west drift (south-east from station under old chamber) has been run 14 ft.; total, 20 ft. In favourable limestone. The 900 north drift from west drift has been extended 30 ft.; total, 336 ft. In favourable broken limestone. The 900 east drift from north drift from west drift has been extended 28 ft.; total, 311 ft. In favourable limestone. The 900 north-west drift from north-east drift from east drift from station has been run 10 ft.; total, 116 ft. In very hard favourable limestone. The report of the directors, prepared for presentation at the meeting on Wednesday next, has been issued, and an abstract will be found in another column. After charging revenue with all the costs and expenses of the explorations and deadwork—which have been very heavy this half-year—and the cost of maintaining the works in a thorough state of repair, the profits for the half-year will probably be about 30,000 $\frac{1}{2}$, so that, after paying the 5s. dividend in August, and providing for the 5s. dividend paid in November, the reserve fund of 75,000 $\frac{1}{2}$, as well as the balance of 25,000 $\frac{1}{2}$ brought forward from last year's accounts, remain intact.

Ruby and Dunderberg, $\frac{3}{4}$ to 1 $\frac{1}{2}$; the weekly report advises fair progress with the rise from the 300 ft. level in the Dunderberg Mine, which had then been driven 164 ft. in all. Several tributaries were working in other parts of the mine, and 11 tons of tribute ore had been shipped. The work at the Home Ticket was going on satisfactorily; the output of ore was increasing; the shipments amounted to only 10 tons; but this was owing to an accident. There were 30 ton besides at the mine waiting shipment.

Flagstaff District, 5s. to 6s.; a telegram received at the office to-day from Prof. Vincent says: "Excellent progress. Shaft to seventh about Christmas; now 60 ft. below sixth. Prospects good. Getting some rich ore." In the notice convening the meeting for Wednesday next it is stated that one portion of the business is "to consider the best means of raising funds to continue the works, and complete the sinking of the main shaft to the 7th level, where, from Prof. Vincent's report, there is reason to expect that the rich vein which runs directly towards, and within 60 ft. of, the boundary of this company's property, and which is being worked in the adjoining mine at a large profit, will be struck, and large returns made, and to pass such resolutions with respect thereto as the meeting may determine."

California Gold, (of Colorado), 1 1-16 to 1 $\frac{1}{2}$; this week's telegram from the mine states that the "mill run was 360 tons; net value, 740 $\frac{1}{2}$; ore sales, 140 $\frac{1}{2}$."

Henriett, $\frac{3}{4}$ to $\frac{1}{2}$ prem.; the advices from the manager state that during the week ended Dec. 14 the cash received from 378 tons of low grade ore and iron was 640 $\frac{1}{2}$.

Kohinoor and Donaldson, $\frac{1}{2}$ to $\frac{3}{4}$; from the weekly report it appears that a massive ore body has been entered in the No. 4 level of the Donaldson Mine, and is valued at 9 tons per cubic fathom. The mine throughout is also reported to present a satisfactory appearance.

Hornachos are quoted variously from 4 to 5 up to 10, 10 $\frac{1}{2}$; a correspondent writes that his broker states that the London Stock Exchange quotations are the lower of those given, but that there are no buyers; he also complains that the advertiser for the shares gave no reply to an offer to sell at the lower price—10 $\frac{1}{2}$ —quoted in the Journal. It should be understood by those forwarding quotations that they should be prepared to buy, or indicate a buyer, at the lower quotation. If no buyer can be found on the quotation 4 to 5—and the complaint to that effect is not alone—it is unjustifiable to quote 10 to 10 $\frac{1}{2}$; the Share List is therefore, left blank.

In Lead Mine Shares there is scarcely any business doing, and as it is almost impossible to sell the metal, even at the decline that has recently taken place, it is not surprising that very few are inclined to buy at any price, and that quotations are merely nominal. Tankerville Consols are quoted $\frac{1}{2}$ to $\frac{3}{4}$; in Tankerville Mine the various points of operation are equal to the values given in last week's report. In Pennerley Mine the Warm Water lode is looking well, the 80 cross-cut being 6 ft. wide, and worth about 4 tons per fathom. The shaft in Potter's Pit is 3 fms. below the 91 fm. level. Good progress has been made in the shaft and other workings at Bog Mine.

Roman Gravels, 9 to 9 $\frac{1}{2}$; a large shareholder, who has been underground during the week and inspected the mine, has expressed himself well pleased with its appearance, the mine not having looked better for a long time. The pumping and winding machinery is in good working condition, but the frost and snow have interfered in a good deal with the dressing operations.

Leadhills, 3 to 3 $\frac{1}{2}$; Wilson's shaft, 16 fms. below the 41, is in a lode worth 6 tons per fathom, and the mines generally continue to look well. It would appear, however, that the great severity of the weather during the last 14 days has considerably retarded dressing operations.

In the Chancery Division of the Supreme Court of Judicature, on Thursday, before Mr. Justice Fry, an application was made by the Rev. John Kiteat for an injunction to restrain Mr. Henry Gould Sharp, a mine share dealer, from publishing a statement of claim, with comments, in an action of Kiteat v. Sharp. The two gentlemen had a dispute about some shares, and Mr. Sharp sent Mr. Kiteat a statement of claim in the action about these shares, with marginal notes in pencil, imputing falsehood to the reverend gentleman. Mr. Sharp also threatened to send the statement of claim, with comments, to the clergy.—The Judge said that such conduct was a contempt of Court, and restrained the defendant from publishing the statement of claim or otherwise prejudicing the fair trial of the action.

The Newport Abercarn Black Vein Steam Coal Company directors on Wednesday declared an interim dividend at the rate of 6 per cent. per annum on the ordinary and preference shares for the half-year ending Sept. 30.

The Instalment Coupon No. 1 for 10s. upon each of the instalment certificates of the Alabama Coal, Iron, Land, and Colonisation Company will be payable at the company's offices, Louthbury, on and after Dec. 27.

Messrs. J. S. Morgan and Co. notify that the coupons due Jan. 6 on the bonds of the Chilian Government 7 per cent. Loan, 1885 6 per cent. Loan, 1887, and the 5 per cent. of 1870; the Chicago and Alton Railroad Company's 6 per cent. Consolidated Mortgage Bonds, and the Philadelphia and Erie Railroad Company's 6 per cent. General Mortgage Bonds (negotiated through them), will each be paid at their counting-house on and after that date.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange, and Finch-lane, has been:—Commercial, 203 $\frac{1}{2}$ to 264; Gas Light and Coke, A (ordinary), 181 $\frac{1}{2}$ to 182 $\frac{1}{2}$; ditto, B, 10 per cent. maximum, 81; ditto, C, 10 per cent. preference, 222; ditto, 7 per cent., 136 to 135 $\frac{1}{2}$; ditto, 4 per cent. debenture stock, 104 $\frac{1}{2}$; Imperial Continental, 194 $\frac{1}{2}$ to 197; London, 209; Monte Video, 15 $\frac{1}{2}$; Rio de Janeiro 24 $\frac{1}{2}$ to 24 $\frac{1}{2}$; South Metropolitan, B, 185 $\frac{1}{2}$. Gas stocks firm, especially Imperial Continental Gas.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance, British and Foreign, 57 $\frac{1}{2}$; ditto, Marine (Limited), 21 $\frac{1}{2}$ to 21 $\frac{1}{2}$; City of London Fire (Limited), 11 $\frac{1}{2}$ to 11 $\frac{1}{2}$; Commercial Union, 19 $\frac{1}{2}$ to 20 $\frac{1}{2}$; Eagle, 6 $\frac{1}{2}$; Employers' Liability Assurance Corporation, 2 $\frac{1}{2}$; Fire Insurance Association (Limited), 2 $\frac{1}{2}$; Guardian, 65 $\frac{1}{2}$; Imperial Fire, 140; Indemnity Marine, 16 $\frac{1}{2}$ to 16 $\frac{1}{2}$; London, 60 $\frac{1}{2}$ to 60 $\frac{1}{2}$; Law Life, 117; North British and Mercantile, 29 to 29 $\frac{1}{2}$; Ocean Marine, 7 $\frac{1}{2}$; Rock Life, 8 $\frac{1}{2}$; Royal Exchange, 8 $\frac{1}{2}$; Sun Fire, 457. Insurances dull, particularly fire companies, upon the Wood-street fire. Commercial Union, and North British and Mercantile being the most speculative, had the greatest fall.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk, Birch-lane, writes:—Opening: There is an active demand for American railway shares at higher prices. Erics can be sold at \$40. Hudson Bay shares are depressed, and only 29 $\frac{1}{2}$. Unified are $\frac{1}{2}$ better. There is only a quiet market for mining shares, this being the day following "pay day," and from transfers having to go into the country it is always a more busy day than the actual selling day itself. Quotations are fairly maintained; the event of the last few days has been the marked advance in Old Shepherds, La Plata, 1 $\frac{1}{2}$ to 1 $\frac{1}{2}$; Roman Gravels, 9 to 9 $\frac{1}{2}$; Colombian Hydraulic, $\frac{3}{4}$ to $\frac{1}{2}$; Almada, 10s. to 12s. 6d.; Organos, 2 to 2 $\frac{1}{2}$; Wheal Crebor, 2 $\frac{1}{2}$ to 3; West Devon, $\frac{3}{4}$ to $\frac{1}{2}$; Devon Consols, 4 to 4 $\frac{1}{2}$. Closing: Great Eastern have fallen to 76 $\frac{1}{2}$, 77. Mexican Railways are only 139 $\frac{1}{2}$ to 139; and Hudson's Bay 28 $\frac{1}{2}$ to 28 $\frac{1}{2}$; Ruby, $\frac{3}{4}$ to 1 $\frac{1}{2}$; La Plata, 1 $\frac{1}{2}$ to 1 $\frac{1}{2}$; Richmond, 7 $\frac{1}{2}$ to 7 $\frac{1}{2}$. Brush Lights, 7 $\frac{1}{2}$ to 8; Hammond's, 4 to 4 $\frac{1}{2}$.

PHOENIX UNITED.—The meeting is called for Thursday next, at Webb's Hotel, Liskeard, when the usual dividend is expected.

OLD SHEPHERDS MINES.—This week's news from the mine is regarded as most important. It is that the lode which was recently discovered at the 10, and was at that point 10 $\frac{1}{2}$ per fathom, is worth over 20 $\frac{1}{2}$ at the 26, and over 30 $\frac{1}{2}$ at the 34. It is also found at the 44 and is expected to have improved in a corresponding ratio with the former level. We understand the agents are now thoroughly convinced it stands whole to the bottom of the mine, and is about five-eighths of a mile in length. According to the printed reports issued with the original prospectus, the lode in many places where it has been worked for silver-lead about 12 tons to the fathom, and was exceptionally rich in silver.

THESAVEAN.—Shareholders who attend the meeting of this company on Wednesday next will, it is said, be astonished at the enormous amount of work done at the mine. A large pile of ore ready for market, 36 heads of stamps working continuously, tinstuff being trammed to the stamps in large quantities, and the dressing-floors a scene of activity. The various lodes are increasing in value as development proceeds.

MOUNTS BAY CONSOLS.—It is announced that three parcels of copper have just been sold from Trebarvah and Sydney Cove, and that it realised a higher average than the others offered. There were 21 parcels sold. This is good news for the shareholders. It is understood that the 48 heads of steam-stamps at Sydney Cove were set in motion a day or two ago, and that shareholders may very soon expect to see regular and large sales of tin.

THE MULBERRY TUNNELS. These works present a remarkable instance of skilful and judicious enterprise. Since their acquisition by the present company a vigorous and energetic policy has been adopted. The four water-wheels, driving 108 heads of stamps, have been thoroughly overhauled and renovated, an engine with 76 stamps has been set to work, and a second engine, to drive 150 stamps, is in course of erection. It will thus be seen that no less than 334 heads of stamps will shortly be in operation, working day and night. Moreover, the whole of the buildings, tramways, machinery, and plant have been either renewed or put into a complete state of repair. The natural advantages of this mine are very great. Being situated in the side of a hill, no pumping machinery is required, and no mining, in the ordinary sense of that term, such as sinking shafts, driving levels, &c. It is, therefore, not surprising to hear that directors have already declared a dividend at the rate of 10 per cent. per annum, and that they look forward with more than ordinary interest to the future operations of the company.

WEST GODOLPHIN.—The various points of operation on the caunter and Bellingham's lodes are progressing satisfactorily. Cock's shaft for developing the new lode is now down 7 fms.; a cross-cut has been commenced south to intersect the lode, and from the appearance of the country rock and its highly mineralised character it is anticipated a good lode will be cut.

DEVON FRIENDSHIP.—The 42 west is worth 12 $\frac{1}{2}$ per fathom, with very good copper ore. The stopes are turning out well.

WHEAL SILVER AND LANTEGLOS.—The secretary has received information of the cutting of a promising lead lode at Lanteglos Mine. This following on the recent important discoveries at Wheal Silver is considered interesting, as proving the ran of the north and south lodes for about three quarters of a mile. Full particulars are anxiously looked for, as the farthest point of work at Lanteglos is only a few fathoms from the great lode which has been cut rich at Wheal Silver.

WEST WHEAL ROSE.—The parish of Newlyn, which has long languished under the ban of the Court of Chancery, is now again well to the fore as a representative of one of the two Cornish industries—mining. East Wheal Rose has been resuscitated with 100,000 $\frac{1}{2}$ capital, and Old Shepherds with 80,000 $\frac{1}{2}$. Less pretentious in amount; but, it is remarked, at least equally likely to attain a grand success, West Wheal Rose, with a capital of 50,000 $\frac{1}{2}$, comes before the public. The promoters commend the reports on this mine to the careful perusal of the readers of the Journal; for within a radius of 2 $\frac{1}{2}$ miles from West Wheal Rose the various mines, the most prominent of which are the Shepherds, the Roses, Deer Park, the Cargolls, and the Chivertons have returned upwards of 12,000,000 $\frac{1}{2}$ (twelve millions) worth of silver-lead ore, and paid immense profits. Many of these mines were probably worked under extraordinary difficulties (chiefly by manual labour, and with primitive and unwieldy machinery), which will not occur with modern appliances. Of this remarkable group, West Wheal Rose forms the centre, and being in comparatively virgin ground of a most favourable character for mining operations, with the greater part of the water drained off by deeper surrounding mines on the same lodes must obtain an equally substantial realisation of wealth to that which the former workers realised at the various points at which these lodes have been worked, and which, with modern appliances, can be worked more

certainly, quickly, and profitably than the former workers ever dreamt of.

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IRONMASTERS' AND MANAGERS' GEM.—Can any correspondent give the name of publisher and price of a 16 page book, 5 in. by 4 in., bearing the above title or something like it; that given being taken from the stamp on cover of a copy the title page of which is lost.

Received.—G. H. P.—"S. H. P."—"J. A. M." (Paris)—"J. R. H." (Cambridge)—"H. R. L."—"B. E." (Washington)—"J. J. B." (Llanelli)—"Shareholder" (Devon Great Consols)—"J. R."—"W. T." (Coosheen)—"H. S." (Truro)—"D. N."—"Old Reader"—"Shareholder" (New Callow)—"Shareholder" (Yuba River)—"Shareholder" (Lewisham). We should think the course proposed to be adopted a most excellent one. A full report of the proceedings will appear in the Journal—"Constant Reader." The work can be obtained through any bookseller.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, DECEMBER 16, 1882.

MINING EXPLOSIONS, AND SUDDEN OUTBURSTS OF GAS.

Since the explosion at Clay Cross the question as to the probable cause of sudden outbursts of gas in mines has been noticed by several mining engineers. Mr. J. Wilson, the late chief of the well-known Oaks Colliery, whose experience in connection with explosions and outbursts of gas is probably second to none, has favoured us with some notes on the subject, which bring out the condition of gases in mines in a clearer light and more intelligible manner than we have previously had placed before us. It is well known that there are some seams of coal that give off very little gas, either suddenly or in a regular manner; but in those that do make a considerable quantity outbursts do take place which cannot be anticipated, and these may also occur in mines that as a rule have been tolerably free from fire-damp. Such outbursts, Mr. Wilson considers, may result from the displacing action of large quantities of water entering extensive open places where the mineral has been worked, and in which there are considerable quantities of gas, the pressure of the column of water being equal on all sides. Taking the depth of such a mine at 350 yards, the pressure would be from 300 to 400 lbs. per square inch. At the same time it frequently happens that the gas exudes in the greatest profusion from every pore in the coal as well as from the roof and floor of the mine, and to such an extent has this been the case at some places in the West Riding that the gas has issued out in such quantities as to fill the roadways for hundreds of yards, and for hours has set all possible ventilation at defiance. When the coal is worked out, and the timber which has supported the strata is removed, the roof must rest on something under it, the same as a bridge resting on pillars, and when a goaf is left standing the effects of this pressure on the gas and the coal, if of the latter there is a thin seam a short distance below the floor, the ground will upheave or "creep," as it is termed, and the pent-up gas being set in motion by the weight coming upon the solid coal and the goaves, finds the point of least resistance, and discharges its volumes at high-pressure speed. This pressure exerted by the superincumbent strata is something tremendous when reduced to figures. Taking a bank of 100 yards in length, and assuming the breadth of coal to be worked 50 yards, and the depth of the mine 400 yards from the surface, it would be found that in each yard of space something like 540 tons was resting. Under such circumstances there would be the enormous weight of 2,700,000 tons of strata only supported by the edges of the coal supporting the limited goaf of little more than one acre in extent. If 5 yards were taken for the pressure extending on each side and end this would give an additional pressure of 864,000 tons resting on the surrounding coal, or a total of 3,564,000 tons on the limited portion of the coal around the goaf. Such a pressure forcing the coal towards the bottom, in the event of the roof remaining intact, the floor or the coal must give way, being no longer able to resist such a great weight. Then as the working faces advance slowly, accompanied by a slight fall of roof, there is a gradual upheaval of the floor forming horizontal spaces or cavities, which are gradually filled with fire-damp of high tension, until at length the whole weight of the strata of the goaf, to the extent, probably, of 3,564,000 tons, settles on the pack-walls and surround the coal and debris within the area of the goaf, the gas pressing down with great force finds its way out at the point where there is the least resistance, near to the coal face and the pack-walls of the goaf, sometimes pouring out of the floor into the surrounding workings. If at the same time there should be a large quantity of fire-damp standing in the upper portion of the goaf it would join that discharged from the floor by the settling of the roof. There is here an enormous quantity of gas that might well account for a sudden outburst. If a space of 45,000 ft. was filled with fire-damp the settling of the roof would force into the roads and on to the workmen that quantity of gas in the course of a few seconds, whilst the rents in the floor from the same cause would be filled with gas of six times the ordinary density, and this being forced out would add an additional 135,000 cubic feet sent into the workings. There would thus be a quantity of fire-damp sufficient to render explosive 1,800,000 cubic feet of mine-space, rendering a passage of 30 square feet area explosive for a distance of 60,000 cubic feet, equal to 20,000 yards, or upwards of 11 miles. This would be sufficient to account for the most terrible explosion that has yet been recorded, and with respect to which no one at the time was able to account for.

As to the suddenness with which great quantities of gas ooze out, Mr. Wilson states that in his experience as manager of several fiery collieries he did not at first believe it was possible for such large quantities of gas to be given off in such a short time, but in 1876 at the Oaks Colliery the intake air was suddenly reversed for a short time to an extent of 600 yards at first, and then in the course of five minutes the gas was at the bottom of the upcast shaft, extinguishing the Stephenson lamps, and filling an area of 90,000 cubic feet with fire-damp, or 900,000 cubic feet of explosive gas. This was all done in the course of five minutes, and through a current of 145,000 cubic feet of fresh air. But such sudden outbursts are not of recent origin, although in some districts they have been altogether unknown, but the improvements made during the last few years in the system of ventilation have been the means of lessening the effects. Indeed, the safety-lamp has been a most effectual agent against the sudden outbursts of gas, while the use of naked lights, as was the case at Clay Cross, must inevitably result in fatal consequences. But these issues, it may be said, take place at times shortly after the workings have been examined by the person appointed specially for the purpose. These outbursts, indeed, from some of the causes enumerated take place at times when the ventilation appears all that can be desired, but the raising of the floor and the giving way of some of the props liberates large quantities of the pent-up gases. There are records of mines suddenly giving off without the least warning 2,000,000 cubic feet of gas. Some managers do not believe in these sudden outbursts of gas until they are forced to do so, when an explosion takes place, and they see no other way for accounting for such a catastrophe. They then say it is the result of the issue of the pent-up gas in a high state of tension, and against which, therefore, no known system of ventilation could have guarded. But this should not be allowed when it is known that men have been working near to where gas has been found, and at the same time using naked lights, and if they are allowed to continue so there is no excuse for the manager. Such men should be well acquainted with the quantity of air passing through the mine every day, the quantity required to neutralise the gases, and what number of feet should be allowed to each man, boy, and horse in the mine, and should also know that constant changes are going on in the atmosphere, often resulting in the formation of a considerable amount of watery vapour which requires removal when it is met with. With the terrible experience of the past, and the knowledge that there is a latent force in coal in the shape of gas of a most destructive character in the largest and best worked mines, managers should now be able to grapple

with any difficulty that is possible to arise. This can be done by a careful and methodical system of ventilation, the working of the mines on the best and most scientific principles, and the strictest discipline. Under no circumstances should the manager of any of the coal mines in the kingdom be allowed to go unpunished for a breach of the first general rule, which requires him to supply an adequate amount of fresh air for all purposes. Nor should a man be allowed to work in a place, even with a safety-lamp, when he knows there is gas. Were these rules rigidly adhered to there would be very few mining explosions either at home or abroad.

COLLIERY ENTERPRISE IN THE FOREST OF DEAN.

MESSRS. CRAWSHAY BROTHERS MINERAL PUMPING STATION.

[FROM A SPECIAL CORRESPONDENT.]

Having regard to the rapid exhaustion of the upper series of mineral and coal measures of Dean Forest, the undertaking commenced a few years ago by the late Mr. HENRY CRAWSHAY, at Shekmanle, on the southern border of the Cinderford Valley, carries with it an importance of exceptional interest to the district. The enterprise in question is by no means a new idea, as, on the contrary, it is rather the extension of a scheme initiated by the gentleman named, when he commenced the development of his famous mineral property on the eastern dip of the ironstone measures, and which for a period of 40 years yielded vast wealth. By successive stages the ores lying east of the field embraced in the area, an extensive one, have been won. The chief output has arisen at the Buckshaft Mine, where the "churns" have reached 14 yards in thickness, of rich hematite quality, and there is unquestionable authority for stating that during the 10 years, from 1860 to 1870, the annual yield exceeded 48,000 tons. The firm possessed other mines drained from Shekmanle station, and the now defunct but long-established firm of Messrs. James and Greenham, the proprietors of Parkend Furnaces, in another valley of the Forest, possessed a mine likewise drained. The latter, known as the Perseverance, is immediately contiguous to Shekmanle, and this mine provided the necessary mixture of the East Dean mineral for smelting with the western district ores. Returning, however, to Messrs. Crawshaw's iron ores, its percentage will be represented within reasonable limit when it is stated the average is approximated at from 40 to 60 per cent. Some of the richer "churns" have fully reached the 60 per cent. maximum. Before the late Mr. Crawshaw's death, two or three years ago, the third stage of sinking had been traversed nearly to the extremity of the mineral, and as his existing pumping station would permit of winning little more ore it became again necessary to extend it, and this was resolved upon for 60 yards, giving an aggregate depth of 190 yards for the depth of shaft. The fact of extending pumping arrangements as indicated—to the initiated in mining operations—do not appear in these days of advanced engineering a formidable matter; but when it is taken into consideration that large schemes in the Forest had failed on the promoters seeking to win the deep series and that to deal with the larger inflows expected at Shekmanle in order to reach the deeper mineral there, the same would involve the laying down of a new and much more powerful plant, few, except those of stout heart, good means, and plenty of hope, would have commanded—in a period, at any rate, of depressed trade—the necessary courage and pluck to have entered upon such an undertaking.

The position was aggravated under the revolutionising developments in regard to cheaper ores of the North, where the progress of science seem to indicate that the cheaply-made metal there would simply annihilate districts such as the Forest of Dean, with its richer and purer ores, because their conversion and cost of get would render such an impossibility thus handicapped. As time went on it was proved that the gloomy apprehensions were in a great measure groundless. It is quite true that the output of crude iron in this district during recent years show considerable diminution, and that silent furnaces and equally silent mineral industries would rather tend in their practical readings to confirm the fears entertained. There are, however, other considerations which have to be taken into account. The ironmasters of the Forest, during the prosperous periods, failed to appreciate the lessons being taught in the North, where the proprietors, having mineral of much less percentage than their own, were successfully initiating developments, which in the end would more than counteract their own position. Such proved to be the case, and contented to allow matters to run on, Messrs. Crawshaw, as one of the firms of ironmasters, notwithstanding their magnificent position in regard to excellence of mineral and abundance of coal, continued their smelting in the same manner as begun 40 years earlier, when many of the large iron-producing districts of the North were unheard of and unknown. What applies to Messrs. Crawshaw's firm will no less apply to others here. To these unfortunate circumstances may be traced, to no inconsiderable extent, the decreased productions of iron. In 1880 the firm, more especially under notice, remedied their antiquated "ways and means" of smelting by erecting a modernly-fitted furnace, which at the present time is producing with great ease upwards of 300 tons weekly of high-class hematite iron. Full advantage cannot be taken of existing facilities, because until Shekmanle pumping station is completed the firm are unable to secure a sufficient quantum of mineral, except purchasing their supplies from other firms, which would place them at some disadvantage; and at that account at this moment another furnace is not blown in. As already stated, the present enterprise involved the provision of increased pumping capabilities, and to effect it the entire arrangements had to be remodelled. Mr. Thomas Smith, the respected manager under Messrs. Crawshaw, whose practical experience with Forest mining none would venture to dispute, and who is as fully acquainted with mining in the district as any man living, prepared the plans, and under his constant and unremitting exertions the work is sufficiently progressed to permit of no possible doubt of success. In respect to the provision of engine and pumps, boilers, &c., the well-known Neath Abbey firm were entrusted with the work, and this, as now completed, is an undertaking of which any firm of engineers in the world might feel proud, a work which stands pre-eminent as one of the most replete, as the engines and pumps will rank among those of the most powerful, if not the most powerful known, in the mining industries. The old engines at their fullest capacity had raised 2000 gallons per minute, but this one and the pumps have been provided by the Neath Abbey firm to throw 2700 gallons, and will approximately entail an expenditure of 25,000.

A few days ago, under an invitation of the courteous manager, and with a proffered inspection of the entire work by Mr. Edwin Crawshaw, I visited Shekmanle, and had the pleasure of descending the shaft in order to see the sinkers, witness the inflow of water, and inspect the pumps. Before entering further upon this interesting detail of my visit I may, in the first place, proceed to describe the engine, which possesses some novel features. It was designed by Mr. P. Teague, the engineer of the Neath Abbey firm. It varies from the usual Cornish pumping-engine in so far that it is actuated by steam above as well as below the piston. Therefore is attained double the power of a single Cornish engine of the corresponding cylinder capacity. The motion is regulated by a fly-wheel and crank, with connecting-rod attached near the pumping end of main beam; by this arrangement the surges of the pumps are taken up by the momentum of the fly-wheel in a direct manner as the preferable alternative to passing through the centre of main beam. By this means will be avoided the risk of fracturing the fulcrum point. The pump-rods are suspended vertically from the out end of parallel motion. The whole is balanced by a beam placed in an archway underneath the basement of the engine-house, which is a splendid specimen of skill and workmanship. The iron beam of the engine is 36 tons, and this enormous weight was raised 90 ft. to its bearings. Its length is 36 ft., and when it is stated that it was lifted into its socket without a hitch, it will be admitted that this in itself was a triumph in engineering skill. The stroke is a 12 ft. one, and working with all the ease and mechanical nicety it is possible to conceive. The cylinder is 70 in. in diameter. The engines are what are known as a double pair of condensers, and they are served by six tubular boilers, two of which are 36 ft. in length. There are three lifts or forcing pumps, each 27 in. in diameter and 12 ft. stroke, suspended on massive iron girders now working over the sinkers. The weight of each girder is nearly 9 tons—four under

each lift—and the H-pieces to receive on the top are 15 tons each; clack pieces from 7 to 10 tons each, and the air vessels are about the same weight. Total weight of the castings and hammered iron rods, &c., for the pump work is upwards of 550 tons. Immediately serving the sinkers is a specially designed engine and pumps, about 11 tons weight, hanging on chains and suspended some 30 yards from the bottom on a wooden beam. This is on the bucket and plunger system and worked by steam from the surface. There are a couple of 17-in. cylinders, 19-in. plunger, and 12-in. bucket. Practically the lower pump is constructed for Dunn's patent drills and, as stated, worked by compressed air from separately erected machinery and conveyed down the shaft in pipes. At the extreme point of working I observed a shoot of water rushing in, some 8 or 9 in. in diameter. There were nine sinkers at the shaft, and operations continue night and day uninterruptedly. In the blasting gelatine is successfully employed, and the adjacently suspended sinking engine is protected from injury by rope matting. The engine-house is 90 feet high from the base to the wall plating, and the masonry is of Forest grey stone; the same material is dressed on the bank and used in the shaft masonry. At the top of the engine-house the thickness of the masonry is 2 ft. 6 in., well braced, and tied in with iron bands. The exterior walls are faced and finished with disregard to cost, conspicuous in all the engine-houses belonging to the firm, although this one, as became necessary, is the most substantial of all the buildings undertaken by the deceased gentleman, and is, *de facto*, the most massive structure of its kind in the Forest of Dean. The roof is covered with slate, the principals being a massive pitch pine, strengthened with diagonal beams, braced with cast and wrought iron, affording great strength and solidity to the whole. These were designed and carried out by Mr. Thomas Smith, the firm's energetic and able manager. I should state also that the whole of the interior fixings of the pump lifts was under his special direction, and as some of these, 15 tons in weight, were lowered to their respective bearings the skill required to cope with such duties need no further reference beyond saying that not a single hitch occurred, and not so much as the pinch of the finger happened, either in relation to that or any other important detail of the undertaking, not only to the manager, Mr. Smith, but to every member of the Neath Abbey firm and others engaged, unqualified praise is due. The large pumps are now working, and with the present pressure and inflow are throwing 3220 gallons per minute. I should add that a portion of the pump castings, under drawings made by Mr. Smith, were supplied by Messrs. Glas, Jordan, of Newport, Mon. From the commencement Mr. Smith has been assisted by Wm. Addis and Elijah Wintle in the engine and ironwork, and by Messrs. Richard Turley and S. Morgan in the pit-work. On the occasion of my recent visit I was assured that during the heavy rains of October and November nothing could have saved the mines of the neighbourhood being flooded but for the timely provision in this extended pumping arrangements, and their speedy employment. Remembering that we are within measurable distance of the time when the deep workings of the Forest must be undertaken in order to prevent a possible and very probable collapse, the present enterprise will have gone a very long way in the direction of proving that under similar well-directed employment of capital the entire coal and iron ore field of the Dean Forest might be readily drained, so that the deep and maiden seams may be won, and thus secure a long era of prosperity to the district. As the question of drainage for the Forest is cropping up, and has for some years evoked attention, all who have interests in the district will be largely indebted to Messrs. Crawshaw for the experience they have afforded in demonstrating what had not been previously proved, and none will be disposed to withhold their best wishes towards them in regard to the prosperity of the undertaking involved in this notice, which has been one surrounded by heavy responsibilities and incessant anxieties, but which, it should be added, have been lightened by the indefatigable exertions and never ceasing labours of their manager.

BLASTING WITH WATER CARTRIDGES.

At a meeting of the North Staffordshire Mining Institute, held at Stoke-upon-Trent, on Monday—Mr. James Lucas in the chair—Mr. Haines, the secretary, read a report of a committee appointed at a previous meeting on the subject of blasting experiments by Mr. James Macnab, of London, with his water cartridge, at Leyceet Colliery, on Nov. 16. It stated that the experiments were made in the Ten-feet coal of the Harrison and Woodburne Pit. The first was in a hole 2 in. in diameter (in accordance with Mr. Macnab's request), 4 ft. deep, the angle of the coal being 45°, 6 ft. on the face. The coal was being worked to the rise in 12 yards. The charge was 10½ ozs. of ordinary blasting powder, or 8-in. cartridge (the water cartridge being 18 in. long), and fired in the ordinary way. A little clay was placed between the powder cartridge and the water cartridge, also a little clay between the water cartridge and the stemming. The result was about the same as in ordinary blasting, according to the opinion of the engineers and workpeople present. A great many sparks were seen. For the second experiment the hole was 3 ft. 10 in. deep, 2 in. diameter, the charge being the ordinary one of 8 ozs. of ordinary powder, or 6-in. cartridge. The charging, as regarded water cartridge, clay, and tamping, was exactly the same as in the first experiment. The result as regarded bringing down coal was successful, but both sparks and flame were clearly visible. After the second experiment it was stated to Mr. Macnab that in the opinion of those present the water cartridge was not successful in preventing flame and sparks, and he was asked if he could suggest any alteration in the firing so as to obtain a different result. His answer was, "No; I don't think I can." It was then decided that it was useless to continue any further experiments in this seam, to which Mr. Macnab assented. After reaching the surface an experiment was tried in a cast-iron pit, 3 in. internal diameter. An ordinary powder cartridge was put in the pipe, and then a water cartridge and sand tamping. The pipe was placed vertically in the soil in the field. The experiment was intended to illustrate a blow-out shot, and certainly both flame and sparks were clearly visible. A second experiment was also made on the surface with gunpowder and a small quantity of tonite, placed in a thin wrought-iron pipe about 5 in. in diameter. A water cartridge was placed on the charge, and was slightly rammed. The report when the charge was fired was a loud one, but the existence of flame was fully demonstrated. Mr. Haines then added that after the experiments at Leyceet the water cartridges were tested at Alderley Green on several different days, and the conclusion arrived at was that it was not successful in preventing sparks and flame when powder was used.

Mr. W. Heath said he attended the meeting at the Leyceet Colliery on Nov. 16, and he earnestly watched the experiments with Mr. Macnab's water cartridge. The first shot was overpowered, as was frequently the case with colliers, and would be if the water cartridges were in general use. It was a practice as much against the interests of the men themselves as against the colliery proprietors. The flame and sparks from the shot could not have been more under any circumstances. He had seen many thousand shots fired, but seldom had he seen more light and sparks from one. The coal was 7 ft. thick and was holed in the bottom. The first shot was 8 inches long and the hole 4 feet deep. The shot was no sooner fired and the results seen than it was stated by Mr. Macnab and admitted by the visitors that it was overpowered. The next shot was as nearly as possible the same as the first as to bulk of coal, depth of hole, and all other circumstances excepting the quantity of powder used. Mr. Macnab himself decided what size of cartridges should be used, and he chose one 6 in. long. The result was that there was nearly as much light and fire flying as in the former case; but neither Mr. Macnab nor anyone else made any remark about this one being overpowered; and, as a matter of fact, if less powder to a very small extent had been used the coal would not have been disturbed. Mr. Macnab, in reply to questions, said he could not adopt any other method to prevent the flame. He (Mr. Heath) thereupon stated that the water cartridge was perfectly useless, and that he should have no difficulty in making by the ordinary method of blasting less light and sparks than had been seen with these two shots with the water cartridge. He was quite convinced that besides the cost and trouble occasioned by Mr. Macnab's water cartridge, there was more than twice the danger from the use of it than from

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the ordinary method. The water cartridge and the clay required took up so much of the hole and so weakened the stemming space that blown-out shots would be more the rule than the exception. The fear of bursting the water cartridges would cause the men to leave empty spaces in the holes through not ramming the first part of the stemming home. This would cause blown-out shots. Again, on some occasions the soft wet clay used before would thrust up the water cartridges amongst the powder, bursting the cartridge. On other occasions the water cartridge would get burst. Mr. Heath went on to explain that to counteract these two effects more powder would be required, and the result would be more sparks and flame. Mr. Macnab had admitted that he could not do more than he had done by his first two experiments to prevent flame and sparks, and voluntarily abandoned further trials. Mr. Settle did everything he could to facilitate the complete trial of the water cartridge at Leycett. He (Mr. Heath) on leaving Leycett recommended Mr. Macnab to turn his attention to another process of getting coal which he (Mr. Macnab) referred to; but he consented to attend some trials at Ad-derley Green the next day. When he (Mr. Heath) went down the pit one experiment with the new process had been tried, which he was informed had been a failure. Another experiment was made under the most favourable conditions with a like result. Another hole was drilled in the same and charged with power and tonite and water cartridge. No sparks were seen, but the result would have been the same if powder alone under the ordinary method had been used, as the shot was considerably under the proper strength and left the coal in the same position as before it was fired. The coal was slightly broken and smoke was perceived issuing from a break near the back of the holing. This was one of the instances in which Mr. Macnab claimed success; but the same result as to sparks could just as reliably be obtained by using powder in the ordinary way, and even blowing the coal better than it was blown in this instance.

Mr. Lawton confirmed the remarks of Mr. Heath as to what had taken place at Leycett. Every facility was afforded by Mr. Settle for the proper trial of the water cartridge, and nobody would have been more pleased than Mr. Settle if the experiments of Mr. Macnab had been successful, instead of being, as they were, a perfect failure.—Mr. Settle said in offering the means of making the experiment he was only actuated by a desire to ascertain the best means of getting coal, and at any future time he should be glad to assist Mr. Macnab or anybody else in doing so.—Mr. F. Silvester testified that every facility was given for trying the water cartridge, and declared that Mr. Macnab was treated with every consideration and kindness, and his subsequent conduct was consequently unaccountable. He proposed the adoption of the report of the committee, and a vote of thanks to Mr. Settle for his kindness in having afforded facilities for testing the water cartridge in the interest of mining.—Mr. Nicholls seconded the resolution.—Mr. Hugh Jones said at Ad-derley Green Colliery he charged every hole for the experiments by Mr. Macnab. He did everything exactly as Mr. Macnab wished him. He had in his experience prepared many hundreds of shots, and the experiments with the water cartridges were not successful. There were only two shots which did not show sparks or flame. He could see no better result from the water cartridge than from clay, and he was of opinion that it would be nothing but waste of time to further try the water cartridge.—The resolution was carried unanimously.

MINING EXPERIMENTS AT LEYCETT.

SIR,—Will you kindly insert the enclosed letter which I have addressed to the Staffordshire Sentinel in reply to a letter sent to that Journal by Mr. Miles Settle on this subject.

London, Dec. 13.

JAMES MACNAB.

MINING EXPERIMENTS AT LEYCETT.

SIR,—A slip of your impression of Tuesday, 5th inst., has just been kindly forwarded to me, containing a reply from Mr. Miles Settle to my letter of 27th ult. Allow me to very briefly say that I have nothing whatever to retract in my letter, and as Mr. Settle's bold letter will not bear the rigid test of keen analysis, I will content myself by simply saying that if any unvarnished facts touches him too near, and makes him write in a malicious style for the purpose of shielding himself under garbled and not strictly correct statements and contradictions, I shall not condescend to wrangle with him further on this miserable subject, but shall freely leave my grievance in the hands of the Institute and the members who were present, having already asked the secretary to do so. As regards Mr. Settle's interested opinion and erroneous estimate of the safety-valve of my patented invention, I beg to refer him and those interested to already established facts regarding my system, and also to my recent successful experiments completed at Ad-derley Green Collieries, where—through Mr. Settle's indifference, I again repeat—I was obliged to go, a report of which has appeared in the Colliery Guardian and Mining Journal, of London, and also in your impression of Dec. 11, including all my published testimonials from eminent engineers and managers, to at once dispose of his absurd ideas of the safety-valve and practical working of water cartridges, and which, singular to say, he himself verbally approved of. As I am averse to public controversy, unless unjustly attacked, I shall not impose on your kind indulgence further on this subject.

London, Dec. 12.

JAMES MACNAB.

DISCIPLINE IN MINES.—At the Blackwood Petty Sessions on Dec. 8, several important cases under the Mines Regulation Act were heard before Mr. W. Llewellyn, Chairman, and the Rev. Rees Jones, two magistrates for the division. John James and Thomas Devan, colliers, were each fined 14s., including costs, for sleeping in the Celynen Colliery, the property of the Newport Abercarn Black Vein Steam Coal Company, on Nov. 21. Enoch Powell, collier, was also fined 10s., including costs, for having in his possession a pipe, when examined at the shaft bottom (lamp station), in the same mine. The bench severely cautioned the defendants in each case, remarking that any future cases would be dealt with more vigorously. The company were represented by their manager, Mr. J. T. Green.

THE COPPER TRADE.—The following are the Customs Returns of Copper for the past month, and also for the first eleven months of the year, reduced to a common denominator, and compared with the same figures in 1881:—

	1882.	1881.
Copper, in pyrites	1220	875
Ditto, in ore	1311	1326
Ditto, in regulus	1081	549
Ditto, in precipitate	1660	1489
Foreign raw copper	2581	3202
Total tons	7853	7441
Value of above	£185,482	£148,856
IMPORTS, JANUARY 1 TO NOVEMBER 30.		
Copper of all descriptions	85,468	79,374
Value of same	£5,352,769	£4,711,828

ROYAL SCHOOL OF MINES ANNUAL DINNER.—The periodical meetings of fellow-students and college chums at the annual social gatherings connected with the institutions at which one has been trained rank amongst the most enjoyable episodes of one's existence, and the heartiness and kindly feeling exhibited at the Royal School of Mines dinner on Monday evening could leave no doubt that student-ship of that School is productive of similar lasting friendships to those which spring up in connection with the oldest education establishments of the country. The Chairman (Mr. E. L. J. Ridsdale, late of the Royal Mint) was a student of 1853, may almost be said to have grown with the School itself, and he may congratulate himself upon the fact that the toast of the "Present Professors" brought from Prof. Huxley the declaration that many of the past Professors were men who had left a lasting mark upon the history of science, and that, with regard to the Normal School of Science and Royal School of Mines it was his firm conviction that, if the Professors did their work properly, and if the scheme of instruction were carried out thoroughly and well, there was no school in Europe in which the instruction for the sake of the student, with a view to his needs, was so thorough and complete as it was in this institution at the present moment. He did not say this from any spirit of scientific Chauvinism, which would lead him to unduly exalt any institution with which he might be connected, but because he believed it was a simple matter of fact. In his opinion, the credit and reputation of the School of Mines, in future years, would stand at even a higher level than it had done in the past. Nor were Prof. Judd's remarks in proposing "The Geological Survey" less gratifying, since he was able to state that former students of the School were now at work on geological surveys in India, Germany, Sweden, and the United States. But the most important part of the proceedings (which are fully reported in

another column) was the exhaustive statement of the Chairman in proposing the toast of the evening, "Prosperity to Mining and Metallurgical Industries of this Country," coupled with "The Prosperity of the Royal School of Mines," it was, indeed, a lucid and concise sketch of the period, and was alike interesting and instructive. Mr. Ridsdale's address, whilst reflecting honour on himself, is, in every respect, a credit to the School which can claim him as one of its early students.

THE TRANSVAAL GOLD FIELDS, AND HYDRAULIC GOLD MINING.

The mineral resources of the Transvaal have during the last 10 years been frequently referred to in the *Mining Journal*; but the unsettled political condition of the country has hitherto prevented their development being undertaken. This neglect, however, is to be no longer a cause of complaint, for an influential syndicate—the South African Syndicate Company—has now been formed with a view to facilitate the opening up of mines in the Transvaal, and from the preliminary arrangements, which are understood already to have been made, no doubt is entertained that the result will be the establishment of a permanent and remunerative industry. The first discovery of gold in the Transvaal was made by Mauch in 1867, and two years later he directed attention to the Murchison quartz range. Batton's discovery of the Marabastad was in 1871; but it was not until 1873 that the Transvaal was known to possess alluvial gold deposits. In that year the Lydenburg district was proved to be auriferous, and is now a recognised gold field. Since then auriferous quartz reefs have been discovered in the Waterberg and other districts; and on the Waterfall, or Lisbon, and adjoining farms there were at the end of August, 1880, no fewer than 137 whites, employing 1640 natives to wash for gold. The total declared value of gold exported between the years 1873 and 1880 was 309,791*l.*, and it is estimated that up to the end of 1882 the amount will reach 1,000,000*l.*, all of which has been produced without the aid of machinery and by unskilled native labour.

But gold is not the only valuable metal to be obtained, for it appears that copper is extracted in great purity by the Kaffirs, that lead ore containing as much as 84 per cent. of lead and 64 ozs. of silver, and cobalt exists in abundance, that tin is found in the southern districts near the surface, and that diamonds have been found in the Nylstroom, Waterberg district. The copper, silver, and lead carry gold in quantities to pay for separation. The syndicate proposes to purchase agricultural farms (about 600,000 acres in extent) near Lydenburg and Waterberg, South Africa, on which have been found gold, silver, lead, and copper, in reefs; the gold is so rich that it can be seen with the eye, unaided by a microscope, in almost every piece of quartz taken from the reefs. Special attention is, however, directed to the placer gold on the Lisbon tract. It is remarked that it requires from one to three years to open up a reef mine, put machinery on it, and obtain results; while to put machinery on a placer claim, of almost unlimited capacity, requires only a few weeks. On the discovery of gold on these farms a rush was made by miners, and to settle title as to the ownership of the mineral, it was necessary to obtain from the Government a concession, which is attached hereto. Other evidences than those given by the owner leads, it is added, to the conclusion that this Lisbon Farm (in extent 10,000 acres) is a centre of one of the richest gold regions ever known. Arrangements have been made with the owner of a part of these properties, embracing about 100,000 acres, based on the representations that he will make a good title to about 100,000 acres, the whole property, together with the water and the minerals. He owns the water running through his property, and it is said to be never failing.

The report of the owner states that the Waterfall, or Lisbon Farm tract, is situated on a mountain side, the title covering land from its highest point, an altitude of about 800 ft. above the lowest point of the track. The land runs from the watershed westerly to a point near the River Blyde. The streams running down the mountain and intersecting the known placer ground are so situated as to command, for gold washing purposes, some 5000 acres of auriferous soil. The waters have an estimated fall in the first four miles of 400 ft., which becomes greater as the River Blyde is approached, where there is a fall of 350 ft. in 1½ mile, and a still further fall at a very steep grade of 200 ft. into the River Blyde. The extent of ground known to contain gold on this side hill, where this water is, is not less than 5000 acres, and commanded by the streams (for washing purposes.) Colours of gold can be found in each shovelful of earth over about 5000 acres. On 1000 acres, nearest to the water, several hundred holes or pits have been dug, the natives finding that the ground became richer the nearer they approached the bed rock. Large sums of gold have been taken away by Englishmen, by hand washing and ground sluicing from the pits, amounting in the aggregate to many thousands of pounds, not taking into consideration that taken by the natives.

THE MINERAL RESOURCES OF COLORADO.

LEADVILLE, AND ITS MINES.

The Golden State, lined with gold and silver, banded with iron and soldered with lead, is the graphic description of Colorado given by the Chicago Inter-Ocean, and in this wonderful State is "Leadville the greatest mining camp on earth" with a production of 10,000,000*l.*, nor are these startling definitions without much justification. Virtually but six years old she, to-day, occupies the proud distinction of producing more gold, silver, lead, and iron than any country of the same magnitude on the globe. To say that her mining interests are yet in their infancy is but reciting a fact so well known to her people that the assertion may seem superfluous. To those unacquainted with the situation, however, this statement may be prolific of some good, for the capital so jealously hoarded up in the large cities of the East may be induced to venture into this great mineral region, and return to its coffers with interest a thousand times increased. Vividly does the mind of the writer revert to the days of the early mineral discovery of Colorado; nor can we forget the many bitter disappointments of the hundreds, nay, thousands, who with highly wrought imaginations and airy expectations, inspired by the greatly exaggerated and wonderfully distorted stories of the fabulous mineral wealth to be found at Pike's Peak, made the tedious and then perilous journey across the great American desert, and who were met upon their arrival at this celebrated Mecca with the startling and dispirited intelligence that there was "nothing in it." Thus, without investigation as to the correctness of their information or veracity of their informants, many of those who were financially able turned, and dejected and sick at heart, retracing their steps, and spreading this deplorable information along their journey, thereby causing large numbers *en route* to this great "land of promise" to return with them, fully convinced (though not really knowing) that there was no mineral in Colorado. Hence it is perfectly clear to the minds of those cognisant of the fact, and who have since acquired practical mining knowledge, that these ignorant and unfounded falsehoods worked great injustice to Colorado, and the development of her true mineral wealth was immeasurably retarded thereby. Again, it is truthfully asserted by experts and those who have practically ascertained the correct processes of extracting the economic minerals from the earth and the proper treatment thereof, involving, as it does, the application of many of the wealth-producing regions of Colorado to-day, that these lands were prospectively years ago by men who proclaimed themselves experts, and who claimed large experience throughout the various mining regions of this and other countries. The fact is they were in utter ignorance of the many and varied forms of mineral deposits, and most practically and conclusively was this fact verified in the discovery of the almost fabulous wealth of the great carbonate development at Leadville. These, with some other causes, have retarded Colorado and delayed her development many decades.

Leadville is located about 75 miles south-west from Denver, but the circuitous route taken by the railroads occasioned the necessity of following mountain streams, increases this to about twice the distance *via* the D. and S. P., and three times *via* the D. and R. G. Railway. The Court House is something more than 10,000 ft. above

the sea level, while some portions of the "camp" are situated far above this altitude. Fortunately, the business and new residence portions are regularly laid out, and the broad and nicely graded streets constitute a source of favourable remark from all. The great production of Leadville (we mean now those of the mines in close proximity and California Gulch, a portion of which is within the city limits) has reached the enormous figures of about \$50,000,000, and this within a space of four years. In conversation with Governor Tabor on this subject he remarked that "Leadville had made more rich men in a short time than any other place on the globe; that if the money taken out of the ground was kept here, Leadville would to-day be wealthier than any city of 50,000 people in the United States." He further estimated that at least 75 per cent. of the mining production goes to New York, Chicago, St. Louis, and Denver—the remainder being spent here for just such improvements and living expenses as are absolutely necessary for the operation of mines and the maintenance of residents. This year's production will reach \$17,000,000, or about \$1,500,000 more than last.

This leads us to the all-absorbing question which has made Leadville a household word throughout the entire world—mining. This great industry is carried on to a further extent than in any camp on earth. It would perhaps be interesting to some to publish a scientific article, furnished us by one calculated to instruct in reference to the disposition, formations, &c.; but, as it is full of technical and scientific terms, the average reader would pass it by, and look for something a little plainer and more practical. Hence, in a general way, we will state that there are a score of mines at Leadville which employ from 75 to 400 men, the pay-roll, as near as we could ascertain, amounting to more than \$500,000 per month. The ore taken out comprises silver, gold, lead and iron, besides numerous auxiliaries necessary for the reduction of the principal ores. In fact, it is stated that every material used in smelting is found here with the exception of salt, and the coke, if the new process referred to in another place proves a success, will be manufactured in sufficient quantities to avoid the necessity of long shipments.

Of the numerous mines now at work and prospering in the Leadville district, those of the La Plata Company are amongst the most prominent, and fortunately the shares in this undertaking are largely held in this country. The organisation includes—President, N. Wetherell; Vice-President and Treasurer, T. Berdell; Secretary, A. Landon; Manager and Vice-President, M. E. Smith. Capital stock, \$2,000,000. There are six furnaces; consuming capacity, 160 tons per day; engine capacity, 160-horse power; boiler strength, 120; three crushers and Cornish rollers; sampling works, laboratory and assay offices; monthly shipments of bullion, 800 tons; 110 men employed at the smelter and 100 at mines; pay-roll, \$150,000 per annum. Their mines are the La Plata, Montgomery, and Guesen—all excellent mines. Mr. Smith is an old Chicagoan, and has had 10 years' experience in this business. The mines of Leadville have been more productive during the quarter just passed than ever before in the history of the camp. The smelters have all been crowded with ore, though some of them have materially enlarged their capacity. The product of the smelters and of the principal stamp-mills has been:—

Bullion	Lbs. 21,469,250
Lead	21,356,201
Silver	Ozs. 1,606,722½
Gold	2,688

The value of these products exceeds 900,000*l.* sterling, and this will no doubt go on increasing, as more will be made of the low grade ore, for it is claimed that Prof. Stamm has discovered a new process for the manipulation of these ores, the treatment of which with the present smelting facilities is rendered too expensive to make it a source of profit. We have paid no particular attention to this new process, nor has there been as yet any fair test of its merits. Much, however, has been claimed for it, and all admit that if it should prove successful there would be a saving of 75 per cent. in the actual expense of treating ores, and at the same time develop a new source of wealth in the treatment of the very low grade ores, which cannot with the present expensive and inefficient system be worked with any profit whatever. The peculiar merits of the process are the great reduction in the price of fuel which it proposes to introduce. The cost of fuel for smelting 6 tons of ordinary ore is at present about \$23; under the new process it will be about \$8. The process mainly consists in the use of bituminous coal, which, in properly constructed retorts, is converted into coke and combustible gas. The coke is mixed with the ore to be smelted, and the gas is injected into the incandescent mass, producing a heat superior and far more economical than any that can be obtained by any other means. If this proposition can be successfully demonstrated, it would, of course, work a complete revolution in the aspect of affairs in the carbonate camp, and, in fact, throughout the mining regions of the world. It would, of course, necessitate a large increase in the number of smelters, and a corresponding increase in the number of people employed in the mines. It must not, however, be supposed from the fact that Leadville is a mining camp, and that her commercial interests are of no consequence. For, notwithstanding the fact that it is one of the largest and wealthiest mining camps on earth, and has a very large local trade, yet it is rapidly becoming the recognised supply point for a great many tributary camps and towns throughout the mining region of the Rockies.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,

MINEOWNERS STOCK AND SHARE DEALERS, &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

The Stannaries Act provides for the use of proxies in Cost-book mines, and under no particular specified form. In reference to meetings it says—"The votes of a majority to value of such shareholders as are present in person or represented by proxy at the meeting." In most Articles of Association of limited companies the same provision is made for shareholders "present in person or by proxy." These proxies should be in the usual form, and deposited at the offices of a company a day or two before the meeting at which they are to be used. The case of the Union Steamship Company, referred to by our correspondent, is altogether different. In one of the clauses of the Articles of Association of that company it was ordered that proxies should be signed in the presence of a witness. This was therefore one of the laws of the company which was sought to be abolished by a special resolution of a general meeting, doing away with the necessity for a witness. Thus at the meeting now referred to all the proxies were unattested, and the Judge ruled that they were therefore not in accordance with the original laws of the company, and invalid. Justice Cotton further said, the right to vote by proxy depended entirely on contract, and all the requirements mentioned in the contract must be followed, or the proxy must be rejected. When, then, the right is simply given to vote by proxy without any special conditions attaching to the right, as in the Stannaries Act and the Articles of most limited companies, no witness is required, though as a matter of form there is little trouble in getting an attestation. A proxy, of course, can only be held by a shareholder in the way of profit.

Where a Cost-book company had special rules passed before the Stannaries Act, they could place themselves under the general provisions of this Act without abandoning their own rules. The Act specially says "Nothing in this Act shall authorise a company to make rules or regulations inconsistent with its provisions, or shall abrogate any special rules or regulations existing at the passing of this Act in the management of any company; or shall authorise the making any special rule or regulation to enable a company existing at the passing of the Act to borrow money."

The series of articles referred to, and headed "Mining in Scotland," were written by Mr. J. Y. Watson in 1846. The mines described were visited; Leadhills was referred to but not visited.

When we introduced the original East Rose to the London markets in 1843, the principal shareholder here was the late Abel Lewis Gower, then Governor of the Bank of England. He had taken the

shares for an old debt at about 10s. each, and was much astonished one day when we bid him 3000l. for one; and we sold for him afterwards at 1200l. and up to 1500l. per share. The mine was always dangerous to work, and every level had to be close boarded up to prevent "runs." The ore, then worth about 14s. a ton, was like "pea soup," and when a board was taken down would come rushing out in a stream. Thus, when a waterspout broke over the mine in 1846, and drowned 40 men, the levels ran together and the old mine was practically destroyed, though enormous sums of money were spent upon it afterwards and until its final abandonment. At the time of the accident ourselves and friends owned North Rose adjoining. We sold a good deal of lead from it, but at a great loss, and as our shaft was in firm solid ground, and therefore of great value to East Rose in their efforts to overcome the effects of the sad accident, we sold them the sett for 4000l., but they never did any good with it.

The old company struggled on till 1854, when the calls were so heavy that in August of that year the mine was sold to a new company, who hoped by sinking on the course of the lode to make the mine pay, but they did not, and, we think, finally abandoned it in 1859. During these times, however, large returns were made; in the beginning of 1851 the mine sold 992 tons, for 13,913l. For the rest our correspondent must form his own conclusions.

There is very little change in the reports this week. Parys is looking better at an important point; so is Crebor. The lode in West Crebor is not looking quite so well in the shaft. Business also is very flat.

D'Eresby Mountain sold this week 20 tons of lead ore, at 97.3s. 6d. per ton.

GOLD IN NORWAY.—Some attention being at present directed to the auriferous deposits of Norway, it may be interesting to state that some excellent samples of gold ore from Bommel Island, about 30 miles north of Haugesund, has been forwarded to London. The ore consists of quartz, sulphur, and arsenical pyrites from a silurian formation, and comes from a vein about 10 ft. in width, which can be traced for about 1200 fms. The discovery being quite a new one very little has yet been done with a view to its development, but as gold has been found in the vicinity previously by Bergmester Dahl, the Government Inspector for Mines in Norway, no doubt is entertained that the opening out of the deposit would prove remunerative. The samples referred to are remarkably rich; some gold has also been washed out in a very primitive manner, and at the present time the mines are being worked by a private party who are understood to hold a large proportion of the property, and to have control of the remainder. There are unusual facilities for working, the property being situated within a few miles of a good harbour.

FORTESCUE (STANNAGWYN) NATIVE TIN, COPPER, SILVER, AND ARSENICAL COMPANY.—An extraordinary meeting was held on Monday at St. Michael's Hall, Lombard-street (Mr. Andrew Stein in the chair), there was a large attendance of shareholders. A resolution to wind-up the company for the purpose of reconstruction was unanimously passed, Mr. Andrew Stein and Mr. Groeber being appointed liquidators. It will be remembered that a new company was formed some months since for the purpose of purchasing this property, but no accounts whatever could be obtained from the proposed liquidator, but an attempt was made to sell the property by public auction, which was frustrated by the directors of the new company. The liquidator to the new company informed the meeting that there was a fatal mistake in the appointment of the proposed liquidator, and he could not advise the directors of the new company to treat for the purchase of the property, as the liquidator appointed in May last was not qualified to give a title. The present liquidators intend forthwith to commence the reconstruction of the company, many highly favourable opinions having been expressed regarding it.

WEST PATELEY BRIDGE.—The report of the directors prepared for presentation at the meeting on Tuesday next regrets that they have again to announce that the year's operations have resulted in a loss of 898l. 4s. The position and prospects of the mine shown no material change since the extraordinary general meeting held in July, when they were fully explained to the shareholders, who decided to continue the operations, and in accordance with the resolution then passed the works have been continued. Capt. Williams reports that owing to the continued low price of lead several places had to be abandoned, which otherwise could have been wrought at a profit on tribute, and chiefly for that reason they have confined their operations to two main points—putting up a rise in the back of the 59 upon the course of the new vein, to prove its value in the upper measures, which is now up 15 fathoms, having passed through a series of horizontal beds, which have to some extent influenced the vein, by changing its underlie and general character for some distance. In conclusion, he expresses a hope that the adjoining piece of ground which he has so often recommended to the directors will be obtained, in which he has every confidence valuable and profitable runs of ore ground will be proved at a small expense.

MISSOURI LEAD.—The statement of accounts for the year ended June 30 has just been issued, and shows that the company have assets (including 463l. 5s. 6d. cash in London and Missouri), 2486l. 14s. 3d. to meet liabilities, sundry creditors, 8709l. 14s. 5d., leaving a debit balance of 6223l. 0s. 2d. The mine cost for the year was 9764l. 3s. 2d., and the London expenses, 1052l. 7s. 11d. — 10,816l. 11s. 1d. Against this returns were (there being 400l. worth of ore, slag, &c., on hand at June, 1881), lead sold, and lead and ore on hand, 493l. 11s. 3d.; rent, farming profit, and transfer fees, 66l. 11s. 11d. — 560l. 3s. 4d.; showing a loss of 10,256l. 7s. 9d. Mr. Thomas Rickard, in reporting upon the various points of operation, says that on the Victoria lode, supposing the ore to continue to the present workings; make a similar test of the Piney lode, which lies parallel to the new lode to the west, and which is known to have yielded rich surface pockets of galena; test the Fish Trap locality where there is very promising ground with surface workings which bear evidence of having produced considerable ore; this lies to the east and north of the new workings; and complete the cross-cut at Bald Hill. These trials, excepting Master's shaft, will involve an outlay of 4000l.; of these, the surface trials absorbing half of the amount are likeliest to give an early result. In conclusion, he says that the sinking of the Master's shaft is a development of a more serious character, and one which is above all desirable, because it is intended to test the Virginia or main lode well beneath the ore, though unremunerative ground of the present bottom levels; 4000l. would be about the outlay required for both the proposed upper trials, and to sink the Master's shaft to a depth of 600 ft., or about 215 ft. deeper than at present.

From Mr. JOHN B. REYNOLDS.—The continued downward tendency of the tin market has had an almost painful effect on mining securities. It cannot be denied that confidence has been shaken, and that timid holders have continued to realise. That there is no ground whatever for misgiving is to us perfectly clear. A panic if it comes will result in large fortunes being made by those who take advantage of it. Happily there are at present no signs of panic. Extreme dullness characterises the market for mining shares, but nothing more. Occasionally batches of shares have been pressed for sale, and have been quickly taken, the buyers getting it all their own way. The present moment may be described as a splendid one for those who are fortunate enough to be in funds. The failures which have taken place in the tin-plate trade simply illustrate the truth of what we ventured to state some weeks since. Now that weak holders have been obliged to succumb, the stocks held by them must of necessity pass into strong hands. The market for mining shares has not been devoid of interest. The enquiry, however, has been almost confined to low-priced and promising securities. Why many low-priced shares have been so entirely neglected and lost sight of, however, it is difficult to say. We have known that for a long time past there has been a systematic effort to depress such shares, which effort has in some instances been successful. New Kitty is a notable example—Wheat Coates is another. West Polbrean probably is a third. Faint praise or silence has been the order of the day. Parties who have been indulging in this little game will have a rather rude awakening. People evidently do not know what is going on at West Polbrean, because they have not read the account of the last meeting. They have also forgotten entirely the facts which render New Kitty unique for situation and promise. The latter mine has already one of the richest mines in the kingdom for its nearest neighbour, and on the other side of it is West Polbrean, which bids fair to rival the prosperous mine alluded to. If New Kitty thus finds itself between two such prosperous concerns, it is fair to ask—What price are those securities likely to reach? Facts are stubborn things, as the detractors of New Kitty may possibly find to their cost. As to Wheat Coates, all that can be said at present is that with 100 hands employed on the works, the mine is fully equipped with machinery, and is already making returns to the extent of 4000l. per month. The discovery, which was thought little of three weeks ago (even by the best informed, amongst whom we do not profess to class ourselves, as far as this property is concerned), has not only continued to increase in value and importance, but has done so considerably. And the improvement is so marked that, should it continue, Wheat Coates will probably before long find its way into the Dividend List.

Nenthead and Tynedale Lead and Zinc Company (Limited).

Comprising—1. The Lead Works and Silver Works at Nenthead; 2. The Spelter or Zinc Works at Tindale; 3. The Freehold Estate, Mines, and Royalties of Priorsdale; 4. Leasehold Mines at Nenthead, Garrigill, and Alston Moor; 5. Freehold and Long Leasehold Properties at Nenthead and Garrigill. The whole being in the County of Cumberland.

CAPITAL £120,000, IN 120,000 SHARES OF £1 EACH, Of which 40,000 have already been privately applied for. 2s. 6d. on application, 2s. 6d. on allotment, and the remainder as may be required.

DIRECTORS.

T. BELL BARKER, Esq., Westoe, South Shields, Director North Green Hurth Mining Company (Limited).
HENRY NELSON, Esq., Newcastle-on-Tyne and South Shields (Dale, Young, Nelson, and Co., Bankers).
JOHN PATTINSON, Esq., F.I.C., F.C.S., Shipcote House, Gateshead.
Major-General HENRY Y. D. SCOTT, C.B., F.R.S., Silverdale, Sydenham.
J. CAMERON SWAN, Esq., Newcastle-on-Tyne, Chairman Green Hurth Mining Company (Limited).

SOLICITORS.

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Messrs. WATSON and DENDY, 141, Pilgrim Street, Newcastle-upon-Tyne.

BANKERS.

Messrs. BARNETT, HOARES, HANBURY, and LLOYD, Lombard Street, E.C.
Messrs. HODGKIN, BARNETT, PEASE, SPENCE, and CO., Newcastle-on-Tyne.
Messrs. DALE, YOUNG, NELSON, and CO., Newcastle-on-Tyne and South Shields.

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Messrs. HORE, TAPP, and DOIDGE, 3, Copthall Buildings and Stock Exchange, London, E.C.
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SECRETARY—WILLIAM M. HENZELL, Jun.

OFFICES—1, DEAN STREET, NEWCASTLE-ON-TYNE.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of acquiring all the freehold and leasehold property, mines, lead ore and zinc ore, crushing, dressing, and other machinery, and smelting mills, situated in the valleys of the Tyne and Nent, and hitherto owned and worked by the London Lead Company, and by the Tindale Spelter Company.

Some idea of the great extent, value, and importance of the undertaking will be gathered from the brief statements following.

The freehold property of the company is extensive, and largely increases the value and solidity of the undertaking. The Priorsdale estate covers 3 square miles. It consists of sheep farms and grazing land, with suitable farmhouses and buildings, together with 400 acres of plantations. There are besides numerous parcels of land and many houses in Nenthead and Garrigill held for the residue of a term of 1000 years. The rents amount to £277 yearly. There are other houses and buildings either reserved to the use of the company or to the public, on which no rental is charged. The growing timber on the Priorsdale estate is valued at upwards of £7000 (see Mr. Bewick's report). This property not being essential to the working of the mines could, if necessary, be sold, reserving royalties, roads, reservoirs, and water rights.

The lead smelting works are complete in every department, and fitted with modern machinery for economical working. They are now equal to a production of 2500 tons of market lead per annum, and are at present in nearly full work.

There is also an extensive manufacture of litharge, of a quality much appreciated, and there is a constant and strong demand for all that is turned out.

The extraction of silver is effected by the Rozen patent process at a great saving in cost. The make of the current year is calculated at about 12,000 ozs.

The spelter or zinc works comprise crushing mills, ore-dressing machinery, light calcining furnaces, 14 smelting furnaces carrying 912 retorts, retort manufactory, kilns, 40 workmen's cottages, evaporation house, and all accessories of a large spelter manufactory. The grinding mills and machinery are driven by water-power; the situation is advantageous for cheap working, and there is good railway connection with the North Eastern system. These works have of late been largely increased. In 1889 the out-turn was 626 tons; last year it reached 1410 tons, and the present output is equal to 1600 tons per annum. The produce of these works meets a ready sale, as the metal is of high-class quality.

The zinc works are of exceptional importance. They secure the means of advantageously treating the immense reserves of zinc ore existing in the company's mines, and of making the working of the mines profitable, even in times like the present when the price of lead is extremely low.

The mines and mining property of the company are of the most extensive character, covering an area of nearly 13 square miles, and comprising some of the richest mining ground ever worked in the United Kingdom. Of this 3 square miles are freehold, and the remainder leasehold.

There are 51 important veins and branches, besides others of less value. From 21 of these ores of lead and zinc are being raised, and in six veins work of exploration and development is being carried on. There is thus the certainty of a steady yield of ore. Much attention has lately been given to the development

FOREIGN MINES.

ALAMILLOS.—Dec. 9: The lode in the 20, driving east of San Martin shaft, is scarcely so productive as it was, its present value being ¼ ton per fm. In the same level, driving west of San Martin shaft, good stopping ground is being opened up, worth 1 ton per fm. The lode in the 40, driving west of San Felipe shaft, is small, and the granite is rather hard for driving through. The 40, driving east of San Felipe shaft, is being opened up at a cheap rate, but the lode is unproductive. The lode in the 60, driving east of San Enrique shaft, has improved in the past fortnight to 1½ ton per fm. In the 130, driving east of Taylor's engine-shaft, there is a very powerful lode, yielding good stones of ore. The 130, driving west of Taylor's engine-shaft, has fallen off very much in value during the past fortnight. In the 80, driving east of San Victor shaft, the lode is worth ¾ ton per fm., and continues to improve as it gets further away from the influence of the cross-cut. The lode in the 80, driving west of San Victor shaft, is large, with good spots of ore. In the 80, driving west of San Victor shaft, there is a regular and promising lode, producing ¾ ton per fm. The lode in the 50, driving west of San Victor shaft, has improved in value to ½ ton per fm. In the 70, driving in the same direction, the ground is hard, and the lode small and irregular. The lode in the 60, driving east of Judd's cross-cut, continues unproductive. In Munoz winze, sinking below the 40, there is a regular and productive lode, worth 1 ton per fm. The lode in Vidal's winze, sinking below the 50, continues valueless. Escobar's winze is being sunk below the 70 through a promising lode, valued at 1 ton per fm. In Ogilby's winze, sinking below the 50, the lode is rather small at present. The usual quantity of ore was returned during the past month, and the stopes are yielding fairly well at present. The works at surface are going on very regularly, and the machinery is in good working order. We estimate the raisings for December at 2.0 tons. The tributors returned 204 tons of ore in the past month.

ALMADA AND TRITO CONSOLIDATED SILVER.—J. H. Clemen, Nov. 4: Exploratory Work: The rise in San José on an ore ball in the back of the new drift; the ball did not continue and the upraise has been stopped.—Drift in Tunnel Engine Drift: A drift starting from near engine-house, Triton, to search for a block of ore standing west of the main Triton shaft; it runs nearly parallel to the present tunnel. The ground is very easy, and 24 ft. were advanced. Drift south on Virgin, Triton, going on the south extension of the Virgin at tunnel level; after going a few feet further south we shall rise in the lode. The back of the South Virgin was stopped when the patio process was in use here, being considered unprofitable; we are in hopes that with the present system it will pay. The ore from this place are green; 7.9 ft. were run, cost \$8 to \$12. Development Work: In Providencia upper workings were drifting on a branch of black ore 3 ft. wide; 4.6 ft. were driven at \$11. The drift north from east section, main stopes, Mina Grande, is being run on a lengthening of the ore chute. We had 4 ft. of ore, and the present breast shows about 3 ft.; 5 ft. were run at \$12.—Excavations: The back of the west stopes, west section, main stopes, Mina Grande, is poor. The east section and the stopes in horse are being packed with attle to secure the backs; stoping on them will recommence two weeks from date. In their north extension, i.e., at San Juan we are stoping south to meet. The south face of said stopes shows ore scattered over a width of 7 to 8 ft., which we estimate at 3 to 4 ft. width of solid ore.—Remarks: The prospects in South Virgin are good for a small orebody. During my absence the drainage north and south at San José was completed up to about 200 ft. This distance was run on vein, in pure ledge matter of good appearance with little or no intrusion of country rock, and of favourable appearance as a quartz lode can show, well defined, &c. Notwithstanding these good prospects no ore was found. The small blocks discovered from April to date for a mill of 30 stamps do not amount to much, so that for the period in question the eating up of the existing blocks has proceeded many times faster than the discovery of new ones. We regret, with our limited reserves, the great delays, caused by the war, in the freight of our machine drills.

CALIFORNIA GOLD.—Mr. Alfred Rickard, in his report for the week ending Nov. 18, states: The 1300 ft. level east of shaft is in 213 ft., yielding 5 tons of fair grade milling ore per fathom; the lode is opening out very satisfactorily. The 1300 ft. level stopes east of shaft are yielding 3½ tons per fathom; the upper mineral being 18 in. wide. The 1300 ft. level west of shaft is in 245 ft.; the appearance of the mineral in the lode is improving. In the 1300 ft. level stopes west of shaft the mineral is 18 in. wide, yielding 3½ tons of milling ore per fathom. The 1200 ft. level west of shaft is in 425 ft., yielding 6 tons of good milling ore and 2 tons of smelting ore per fathom; the lode is maintaining its value very satisfactorily. The 1200 ft. stopes west of shaft are turning out from 5 to 6 tons of good milling ore per fathom. The 1100 ft. level east of shaft is in 230 ft., yielding 3½ tons of fair grade milling ore per fathom. In the 1100 ft. level stopes east of shaft the lode is yielding 4 tons of good grade milling ore per fathom. The 1100 ft. level west of shaft is in 235 ft.; a great improvement has taken place during the past week, and there are good indications of good pay being discovered on going a little further west. In the 1100 ft. level stopes west of shaft the lode is 12 ft. wide, yielding 6 tons of good grade milling ore per fathom. The stopes are going out east and west of the rise at 30 ft. above the 1100, where the ore body first was struck; it is developing satisfactorily. An improvement has taken place in the concentrates with the higher grade ore from the 1100 and 1200 levels. The grade of the mineral from the 1300 level in general has been low hitherto, but the quality should be better now, judging from the appearance of the lode.

Telegram.—Mr. Rickard, Dec. 14: Mill run (15th week) 360 tons; net value \$3750 (740l.); ore sales, \$700 (140l.).

of the mines, and the production is increasing. Last year's produce exceeds 4000 bings lead ore and 1500 tons zinc ore, and is the largest since 1875. From the work already done it is seen that there will be a further increase during the current year. There are 163 men raising ore, and 26 employed in exploration and development. The reserves, as set forth in the report of Mr. Bewick, are computed at 12,000 to 15,000 tons of lead ore, and 40,000 tons of zinc ore.

The ore is cheaply extracted, for there are 43 miles of levels (of which 35 miles are laid with iron rails), and these effectively drain the mines, and by them the mineral is brought to the day, and direct to the various dressing-floors. There is thus no cost for pumping nor for lifting the ore from shafts. This extensive system of levels, besides securing the cheap extraction of the ore, gives easy access to the great extent of valuable mining ground in which new developments and exploring works are being advantageously carried forward.

The Admiralty deep level driven from Alston up the Nent Valley uncovers a section of strata 40 fms. deeper than the present working levels.

All the machinery in connection with the ore-dressing and in the smelting works is of the latest and most complete description, and, except in the silver works, is worked by water-power, which is of unusual extent. The main storage reservoir, which is on the company's freehold, has an area of over 6 acres. Its cubic capacity is equal to 17,455,000 Imperial gallons.

Great advantages result from the combination of the lead and zinc industries. The company having their own mines of both lead and zinc ores, and having smelting works for both metals, it is believed, the most extensive and complete of the kind in the United Kingdom.

The smelting works, both for lead and zinc, are very advantageously situated for the purchase and treatment of ores obtainable from the neighbouring mines of other companies.

The mines and works are taken over at a moment when the prices of lead and zinc are extremely low, and, in consequence, come into possession of the company on most favourable terms. It is calculated that even at present prices the undertaking will yield good returns on the capital invested, while an improvement in prices to a point much below the average of the last 30 years will make it largely profitable.

The transfer will be direct from the London Lead Company and the Tindale Spelter Company respectively, to the present company, the actual purchase-money being £86,000, but in addition there will be a sum of £2500 paid to cover cost of inspections, agency, and other expenses connected with the negotiations for sale to the company.

The purchase dates from Sept. 30, 1882, and all profits from that date accrue to the company.

In the event of no allotment being made, the deposit paid on application for shares will be returned in full. Should the shares allotted to any applicant be less than the number applied for, the surplus paid on application will be credited in reduction of the amount payable on allotment.

Full Prospectuses and Forms of Application for shares can be obtained at the offices of the company, and from the Bankers, Brokers, and Auditors.

CANADIAN COPPER AND SULPHUR.—Francis Bennetts, Nov. 30: There has been no important change in the general aspect of the mines. Some slight variation has taken place, such as that the vein in the 23, west of No. 5 shaft, Hartford Mine, is more mixed with slate; also that the vein in the 50, east of No. 5 shaft, Hartford Mine, is a little improved, as is also the vein in the 35, west of No. 5 shaft. The smelting works are running well.

CAPE COPPER.—Ookiep, Oct. 31: Good progress has been made in driving the 105 ft. level, south-east of new shaft; the ground has not undergone any change to notice since last report. The 92, north-east of No. 45 winze, is worth about ¾ ton of copper ore per fathom. The ground in the 92, north-east of north level, is very favourable for copper ore, and at present produces a few stones; the 92, east of new shaft, is still unproductive. The stopes in back of the 92, south of No. 36 winze, yields 6 tons of copper ore per fathom, and the stopes in the back of the same level, north-east of No. 23 winze, is worth 4 tons. The ground in the 30, north-east of new shaft, composed of quartz, iron, and copper ore, the latter not in sufficient quantities to value. No. 37 winze, sinking below the 68, is worth 6 tons of copper ore per fathom. The 68, east of north level, has improved of late, and is now worth 3 tons of copper ore per fathom. The 60, north from new shaft, has been suspended, and the men are put to drive east a few fathoms back from the forebreast in ground spotted with copper ore. The stopes throughout the mine continue to produce fully their estimated quantities of copper ore.

SPECTAKEL.—Ookiep, Oct. 31: The stopes in the bottom of the 75 has gradually fallen off in value; present bottom is worth ¾ ton of copper ore per fathom. We have suspended the two drivings in the 75, south-east and north-east from winze, and the men are put to drive north-east and north-west from incline in the 75 in ground worth about ½ ton of copper ore per fathom. The stopes in the bottom of the 64, east from winze, produces 2½ tons of copper ore per fathom. The 64, south from winze, produces a little copper ore, but not sufficient to value. The stopes in the 61 yield 3 tons of copper ore per fathom, and the stopes in bottom of 53 is worth 3½ tons.

TRIAL MIXES.—Ookiep, Oct. 31: There is no material change in the two drivings in the 40 ft. level, south of shaft, and east of winze, they are still unproductive. The ground in the 25, east from north level, is composed of quartz, and shows a few spots of copper ore.

Returns for October.—Ookiep, 20 tons of 28 per cent.; Spectakel, 144 tons of 37 per cent. Bills of lading received:—524 tons per Empress; 602 tons per Hinda. Arrivals at Swansea:—The Elita, San José, L'Esperance, and Golconda. Arrivals at Port Nolloth:—The Nil Desperandum, and Celdice R.

CHILE GOLD.—The manager telegraphs that the remittance for the month of October was 1300 ozs. with 35 stamps, working 22 days only. This short month's working was occasioned by a temporary breakdown of the boilers; these are the old boilers taken over from the former company. Two new 30-horse Cornish boilers have been sent out, and should be in Ciudad Bolivar at the present date, whence they will be forwarded without delay. When these are in position all the machinery at the mine will be in thorough efficient and working order, and there will be no further liability to break down of this description. In addition to the above two new 30-horse power Cornish boilers and an additional 20 stamps will leave England about Christmas.

COLORADO UNITED.—Dec. 15: The 12th drift carries on an average 1 in. of mineral for cobbing with a little concentrating stuff. The 13th drift since last report has improved, showing ore from 3 to 4 in. good quality mineral. The stopes at the back of the 12th level are yielding about their average of ore; a solid streak varying from 2 to 3 in. giving a good average of 5 in. The winze at the bottom of the 12th level to the 13th level is now standing idle. This winze is about ready to commence with the 13th level, when that drift, which is yet to be driven 20 ft., meets it. The stopes at the back of the 12th show a good solid vein of mineral, in some places 8 or even 9 in., and then narrowing down to 2 or 1½ in., but only to open out again. Mr. Hamill hopes to be able to send off each month's accounts 10 days from the end of the month. During the week the following quantity of mineral has been sent to Georgetown:—Four sacks first-class cobbed ore, 217 sacks second-class cobbed ore; 38 sacks screenings; total, 255 sacks.

DEVALA MOYAR.—Mine Manager, Nov. 29: The mill is still at a standstill for want of the Bombay machinery, but I am happy to say the handy load came yesterday, and I expect the balance immediately. At Sirathear Reef we have continued No. 2 tunnel along the eastern side of the lode 20 ft., and timbered the drives securely. The drive is in quartz, in which we can see free gold and a large quantity of pyrites. No. 1 cross-cut has been driven 13 ft. in country rock. I am continuing it to see if there is not another reef running parallel with it. We are nearly blocked with quartz outside, and are, therefore, working short handed, doing such progressive work as putting in drive passes, and, in fact, any work that we can do to advantage. We are also stripping the lode on the surface, which, when we commence crushing, will be sent down the shaft into the main pass in the mine, and will go from thence direct to the mill.

DENVER GOLD.—Manager, Nov. 29: Sample mill returns on ore from the drifts have been as follows:—The 800 west drift, 13 tons, 3.6 ozs. gold; 1150 west drift, 6 tons, 7.5 ozs. gold; 1275 west drift, 12 tons, 7 ozs. gold; 1350 cross-cut, 6 tons, 2.5 ozs. gold. The above shows a most satisfactory improvement in the 1150 west drift, and also shows our newly found ore at the 1350 ft. level (footwall vein) to be of very good quality. The last few days have seen an improvement in the 1150 west drift. It now carries a 4-ft. crevice of pay between the walls. Of this about one-fifth is smelting ore, which at present assays 6½ ozs. of gold and 12 ozs. of silver per ton; worth about \$109 per ton at the smelters' net price. The remainder of the crevice has averaged over 4 ozs.

gold per cord for the last 2½ cords milled, this including the poor run of 2 ozs. gold from the 12 tons which I reported a week ago. For the last run of 6 tons the yield has been over 1 oz. gold per ton. If we are entering a large body of ore we have an immense thing ahead of us, but we can tell nothing in regard to its permanency as yet. The return from the ore of the footwall crevice (the 1350 ft. level) is air, showing 3 ozs. per cord, but a water-wash in the mine mixed so much worthless dirt with this ore as to greatly reduce its apparent value. It is probably good for over 4 ozs. per cord. This in a 2 ft. crevice is not bad. We are now driving two drifts—one east and the other west—on this crevice from the cross-cut, and hope to open good ground. The water continues to flow from this crevice with unabated force, and we consider this a very favourable indication. These two drifts, as well as the 1350 west and the 1275 west drifts, are now being pushed ahead with all speed, three shifts of miners keeping them going every hour in the 21. The completion of the two winzes gave us the needed ventilation to make this possible.

EDBARD—F. Drake: Statement of progress for the week ending Nov. 11: No. 1 Drift: Total distance, Nov. 4, 653 ft.; run for week ending Nov. 11, 12 ft.; total distance, Nov. 11, 675 ft.; run for the month of November, 24 ft.—No. 2 Drift: Total distance, Nov. 4, 362 ft.; run for the week ending Nov. 11, 14 ft.; total distance, Nov. 11, 376 ft.; run for the month of November, 24 ft.—Upraise No. 2, from Drift No. 1: Total distance, Nov. 4, 38 ft.; total distance, Nov. 11, 38 ft.; run for the month of November, 7 ft.—Drift No. 1 (south from Upraise No. 2): Total distance, Nov. 4, 10 ft.; run for week ending Nov. 11, 10 ft.; total distance, Nov. 11, 20 ft.; run for the month of November, 20 ft.—Drift No. 2 (north from Upraise No. 2): Run for week ending Nov. 11, 10 ft.; total distance, Nov. 11, 10 ft.; run for the month of November, 10 ft. Drift No. 1 continues in the same ledge matter heretofore described. No special change. Drift No. 2 still has the wall, and the rock has come in a little softer; otherwise unchanged. Upraise No. 2 still has a good showing of quartz, as already reported; and the same is shown in Drift No. 1, southerly from this upraise, following along the wall. This driving is now advanced 20 ft. in quartz. Drift No. 2, northerly from this upraise, is advanced 10 ft., and is in rock of a promising character. Had we not so long been suffering disappointment I should regard the rock we have very promising, for there is no reason why it should not lead to ore of good quality.

FORTUNA—Dec. 6: Canada Inco Mine: In the 70, driving west of San Pedro shaft, there is a strong, regular, and productive lode, worth 1 ton per fathom. The lode in the 80, driving west of San Pedro shaft, is well defined, and yields occasional stones of ore. In the 90, driving in the same direction, a good length of fairly productive ore ground is being opened up, valued at 1 ton per fathom. Good progress is being made in 125, driving east of O'Brien's engine-shaft, but the lode does not contain ore enough to value. In the 100, driving east of Lander's shaft, there is a regular and compact lode, producing 1½ ton per fath. Arabi's winze, sinking below the 110, is holed to the 120. In Elvira's winze, sinking below the 80, the lode is valued at ¾ ton per fathom, but we are expecting a further improvement.

Los Salidos Mine: The lode in the 175, driving west of Taylor's engine-shaft, is small and poor, and the ground hard. In the same level, driving east of Taylor's engine-shaft, the lode is worth ¾ ton per fathom, and unsettled by strong cross-courses. The lode in the 145, driving east of Taylor's engine-shaft, is very valuable, but it has declined in productiveness to 2 tons per fathom. In the 130, driving east of Taylor's engine-shaft, the lode has also fallen off in value to 2 tons per fathom. The lode in the 120, driving east of San Pablo's shaft, is very promising, producing 1½ ton per fathom. Bey's winze, sinking below the 35, has reached the necessary depth for the 45 ft. level. The lode in Alameda's winze, sinking below the 160, has improved to 1½ ton per fathom; the granite is rather hard for sinking through. The weekly weighings of ore were kept up very steadily during the past month, and the stopes are turning out moderately at present. The works at surface are going on satisfactorily, and the machinery is in good condition. The resident director writes under date Nov. 25: The striae returned 176½ tons of ore in the past month.

San Antonio Mine: The lode in the 55, driving east of Henty's engine-shaft, is regular and firm, the granite being much harder than it was. In the same level, driving west of Henty's engine-shaft, there is a strong and well-defined lode, yielding good stones of ore, worth ½ ton per fathom. The lode in the 45, driving west of Henty's shaft, is well formed, and contains occasional stones of ore. Perez winze, sinking below the 45, has reached the necessary depth for the 55.

San Francisco Mine: The driving of the 25, east of El Clarin shaft, is suspended for the present. In the 40, driving east of San Francisco shaft, the lode is regular, and sometimes yields good stones of ore, worth ½ ton per fathom. The lode in the same level, driving west of San Francisco shaft, is small and unproductive. The surface works—which include the buildings for a 35 in. beam engine—are going on satisfactorily, and the machinery in both mines is in good condition. The usual quantity of ore was delivered to the Fortuna smelting in the past month, and the stopes are yielding moderately at present. We estimate the raisings for December at 75 tons.

ISABELLE GOLD AND SILVER—F. Lewis Chalmers, Nov. 3: The Stella shaft is now down 53½ feet. The shaftmen lost one and a half day, having to make way for the carpenters getting in the foundations of the gallows frame. The west drift was run ahead by one man 8 ft., and is still in the same clay formation. The north drift was cleaned out and retimbered 27 ft.; water pouring from the face. The engine foundations are being sunk, which done, the machinery will be put in. The boiler is ready to be set, but the frost is so severe up there that the mortar sets before it can be used. Next week, however, I think I can spare a mason from the furnace, and by heating the water get the boiler set. At the mill most of the machinery is in place, and the upper floor of the furnace is about half finished. The country around the Stella Mine is porphyry.

KOHINOOR AND DONALDSON CONSOLIDATED—Mr. Alfred Rickard, in his report for the week ending Nov. 18, states:—Communication having been effected between the No. 1 winze (down 51 ft.) and the No. 2 rise (up 135½ ft.), and good ventilation established in No. 2 level, drifting at No. 1 will be resumed by four men, and an additional force of eight men will be put on stoping at the No. 2 level stopes north and south of rise, where the lode is opening out very satisfactorily, averaging 1½ ft. in width (in some places there is as much as 2½ ft. of mineral), yielding 2 tons of smelting and 2 tons of concentrating ore per fathom. The No. 3 level is in 174½ ft., yielding 1½ ton of smelting and 2 tons of concentrating ore per fathom; lode 2½ ft. wide, strong and well defined. No. 3 winze is down 43 ft., yielding 1 ton of smelting and 2 tons of concentrating ore per fath.; lode 2 ft. wide. The No. 4 level is in 206½ ft., yielding 4 tons of concentrating (mostly low grade) ore per fath.; the mineral is 2½ ft. wide. The No. 4 winze is down 57½ ft., yielding 1 ton of concentrating ore per fath.; a little improvement has occurred in the lode. In the No. 4 level stope a strong body of mineral is being opened out, which if on milling it prove profitable will be a source of supply of importance; the mineral is 4 ft. wide, valued at 9 tons per fathom. In the 100 ft. level rise (up 18½ ft.) the vein has somewhat improved. Drifts have been started in the 300 ft. level south (in 4½ ft.), and 300 ft. level north (in 4 ft.), but no lode has been taken down by which to value. In the Kohinoor 200 level west the vein is 18 in. wide, composed of friable quartz and decomposed feldspar, slightly spotted with iron pyrites. Its footwall is well defined, underlying slightly to the north. In the Kohinoor 200 level east 2 in. of quartz spotted with lead occurs in the broken gneiss on the hanging wall. The resident director writes under date Nov. 25: From our weekly report of Nov. 15 you have no doubt noticed that stopes in Donaldson level No. 4 have entered very massive ground, worth 9 tons per fathom. The ore body makes a splendid showing, and the mine throughout fully maintains its very satisfactory appearance. Stoping is being pressed on as fast as possible.

LINARES—Dec. 6: Pozo Ancho Mine: In the 115, driving east of Warner's engine-shaft, there is a large and powerful lode, worth ½ ton per fathom. The lode in the 130, driving in the same direction, yields good stones of ore, valued at ½ ton per fathom. The 150, driving west of Warner's engine-shaft, continues unproductive. In the 115, driving west of Warner's engine-shaft, a great length of rich lode has been opened up, but it is not so good at present, its value being 1 ton per fathom. The lode in the 135, driving west of Pell's engine-shaft, has very much improved, and is now opening valuable ore ground; worth 2 tons per fathom. The 135, driving east of Pell's engine-shaft, continues unproductive. In the 120, driving in the same direction, a great improvement has taken place, the lode being valued at 2 tons per fathom. In the 105, driving east of San Francisco shaft, the lode is rather small. No. 245 winze, sinking below the 90, is holed to the 100. In the 247 winze, sinking below the 100, there is a very powerful lode; worth 2 tons per fathom. No. 245 winze, sinking below the 75, is situated, east of Warner's engine-shaft, and is in a valuable lode, producing 2 tons per fathom. The full complement of ore was delivered into the stores during the past month, and the stopes continue to yield fairly well at present. The various works at surface are going on very regularly, and the machinery is in good condition. We estimate the raisings for December (five weeks) at 300 tons. **Quintientos Mine:**—In the 100, driving east of Taylor's engine-shaft, the lode is regular, with good stones of ore, but the granite is rather hard at present. The lode in the 90 driving in the same direction is large and open, with occasional stones of ore. In the 65, driving east of Judd's shaft, there is a compact, well defined, and profitable lode, producing 1 ton of ore per fathom. In Taylor's engine-shaft the men are getting on well in sinking below the 100, which is through hard granite rock. Orta's winze is being cheaply sunk below the 32 through a compact and nice little lode, worth 1 ton per fathom. We estimate the raisings for December at 100 tons. **Majada Honda Mine:** In the 70, driving east of San Francisco's shaft, there is a compact and promising lode valued at 1 ton per fath. The lode in the 70 (No. 2 lode) driving in the same direction is small and regular, producing ½ ton per fathom; the ground is very hard. The various works were kept on regularly during the past month. The usual quantity of mineral was sent to Pozo Ancho Station, and the stopes are yielding moderately at present. The machinery is in good working order.

NEW EMMA SILVER—Geo. Cullins, Alta City, Utah, Nov. 20: Our machinery was started on Nov. 18, and, with the exception of a few changes necessary to be made to the starting of new machinery, works very well indeed. These changes will of course be made at once, when sinking in shaft will be immediately resumed.

—Nov. 27: The machinery is all in place, and works very well, and I am now curbing the shaft. Sinking shaft will be resumed to-morrow, and shall push it with utmost speed.

NUNDYDROOG GOLD—B. D. Plummer, Nov. 21: Mining Operations: All underground work progresses to my satisfaction. It has been my desire to concentrate our forces as much as possible on the points likely to give the most speedy and satisfactory results, for this reason I have removed some of the miners from the new ground. **Maharajah Reef** to Taylor's shaft works; we have commenced to sink below the 95 with one company, and in a week more we shall start another shaft below that level. My object is to test the vein at a point as possible with as little delay as may be.

PIERREFITTE—Manager, Dec. 10: At last we have fine weather, rain and snow stopped falling, in place of which we have had frost. The latter, of course, is an inconvenience for us in dressing, but it is much preferable to rain and snow. I think next week we shall be getting some lead again. The men have not as yet begun stoping in the bottom.—**South Mine:** There was more ore which had fallen in the pit than I was aware of, and it has consequently required time to clear it, besides which we have had the water to pump out again. A short time since we struck water in the end of driving south-east on the course of the lode, and the further we advance the more it increases; but what strikes me as extraordinary is that the water is now much less in the pit, I should say about one-half. I shall not be surprised to find further on a slide similar to that we have now. If so it will be a good thing for the mine. During the last few days the lode has very much improved in value in this end. There is also, I am glad to say, more lead in the level end going north-west than I have ever seen before. This being the case, the lode continues rich in length, and that this mine is not a deposit. In the north mine I have again increased the number of hands. In the No. 1 stope I have now 12 miners at work. The lode continues

good, but not quite so good as it was. The other parts are just as usual. About 100 tons of ore has been broken, and the same quantity sent to the floors.

PLACERVILLE GOLD QUARTZ—Nov. 18: Have not sunk any in winze from 7th level during the past week, have been stoping out from same, showing no improvement. Have been timbering and securing ground in west vein stopes between 5th and 6th levels, and have extracted the usual amount of ore from same. You will observe that the mill has run full time during the past week. Everything running smoothly at mill and mine.

PONTIGBAUD—W. H. Rickard, Dec. 2: Rouse Mine: The 225 metre level, south from Taylor's shaft, has a more promising appearance, the lode produces stones of pyrites. In the 200 metre level south the lode has produced some good stones of ore during the month, the present end is unproductive. The 175 metre level south produces a little low quality orestuff irregularly. The winze below this level is unproductive. The rise in the back of the 103 metre level, south on Virginia's lode, yields ½ ton of ore per current metre. The rise on the eastern part of the lode has been holed to the winze from the 80, opening a piece of productive ground. The 60 metre level south, on the two spurs of Virginia's lode yields a little orestuff of low quality. The 20 south on the same part on the lode is unproductive. At Soursoube the driving of the adit south is suspended, the end of the level having got into a barren rock. We have set to sink below the level to prove the lode in depth.—**St. Denis:** The sinking of the shaft below the 30 metre level goes on regularly in pretty favourable rock. The 30 metre level south is in a soft and unproductive lode. The lode in the same level, north of shaft, is altogether about 1 metre wide, producing ¼ ton of ore per current metre. The winze below the adit level is unproductive. But little has been done at Mloche for want of air; the tribute pitches are poor.—**La Brouse:** The sinking of Alice's shaft has gone on pretty well during the month, and will attain the necessary depth for the 200 metre level in about a week. The 160 metre level north yields ½ ton of ore per current metre; the same level south is unproductive. The 140 metre level south yields ½ ton of ore per current metre. The 120 metre level north has yielded stones of lead ore and iron pyrites during the month, and the rock is more promising than before. The 80 metre level south is unproductive.—**Pradal:** The 110 metre level north opens productive ground, yielding ½ ton of ore per current metre. The same level south yields ¼ ton of ore per current metre. The winze in the 90 north, over the 110 end, yields ¼ ton of ore per current metre. The 90 metre level south, on the eastern part of the lode, produces orestuff of average quality. The 90 in the same direction on the principal part of the lode is unproductive. The 70 metre level, both north and south, yields no ore to value in either end. The western part of the lode in the 30 metre level south yields ¼ ton of ore per current metre.—**Surface:** The weather has been very wet during the month, giving us a full supply of water everywhere. Our dressing has been carried on a without interruption, and our samplings have amounted to 217 tons.

RHODES REEF—Extract from the mine manager's report, dated Nov. 20: The mill has continued to run steadily and smoothly during the past week. We are still crushing from the old pile of quartz taken from the cap of the reef, and have put through the usual quantity. As I informed you last week, the quartz is poor, but by the end of this week I hope to start crushing from three new reefs struck in the southern end of the claim. We shall then have much better results in free gold, and a very much larger quantity of pyrites. As far as we have gone in this end of the claim I think the quartz will yield 10 per cent. of pyrites, a sample of which Mr. Forrest assayed, and gave 11 ozs. per ton. I am pushing on this level as fast as I can, so as to be able to give you the yield by the time of your Devala Moyer Company meeting.

RICHMOND CONSOLIDATED—Telegram, Dec. 12: Week's run (No. 4 furnace), \$13,000, from 323 tons of ore; refinery \$12,000.

—**Samuel Longley, Nov. 20:** The 300 north-east drift from south-east drift has been run 12 ft. Total 40 ft. In favourable limestone. No further indications, and fissure closed. The 300 rise from south-west drift from station has been raised 30 ft. on fissure in limestone, with some of the best quartz ore. The 300 winze from north-east drift from south-east drift has been sunk 3 ft. on fissure, with favourable indications, pinched out in hard limestone. The 700 north-east drift from main west drift has been run 19 ft. Total 71 ft. In compact favourable limestone. The 700 south-west drift from main west drift, has been run 19 ft. In favourable limestone, commencing at a point 42 ft. east from main winze to 800 level. The 700 west drift (south-east from station under old chamber) has been run 14 ft. Total, 20 ft. In favourable limestone. The 700 rise from main winze has been run 20 ft. In ledge matter and limestone, commencing 30 ft. from top of winze. The 800 west drift from north drift from quartzizing has been extended 20 ft. Total 33 ft. In favourable limestone. The 800 south-west drift from above has been run 23 ft. Total, 26 ft. In favourable limestone. The 900 new north drift from west drift has been extended 30 ft. Total 336 ft. In favourable broken limestone. The 900 east drift from north drift from west drift has been extended 28 ft. Total 311 ft. In favourable limestone. The 900 north-west drift from north-east drift from east drift from station has been run 10 ft. Total 116 ft. In very hard favourable limestone. The 1050 north-west drift from station has been extended 29 ft. Total 205 ft. In hard dark limestone.

RIO GRANDE DO SUL (BRAZIL) GOLD—Henry Eddy, Oct. 28: The different points throughout the mine are without material change since my last report. The whole of the measurements for the month will be taken on 1st prox., and will be duly inserted in my report of the 4th. The new stope, west of the western shaft, produces fully 1 oz. of gold to the ton.—**Machinery:** The greater part of the new machinery has arrived, and the parts broken (previous to arrival), which have been put under repair at Rio Grande will probably be here sometime next month. The stope for the loading has been quarried, and the road to bring it to the ground will be completed in nine or ten days. This road will also serve to bring down the machinery. The foundation for the loading will be got out next week. The ground is soft, and made it necessary to get a depth of 9 ft. for a good foundation. The whole of the works are being proceeded with as fast as circumstances will admit.

RUBY AND DUNDEBERG—Nov. 19: Dundeburg: The ground in the upraise above the 300 ft. level is somewhat harder, progress this week 16 ft.; total, 164 ft. above the 300 ft. level. There are 12 tributaries at work at various parts of the old workings. There is no change in any of the stopes being worked on tribute; 11 tons tribute ore shipped this week. Four contractors, one carman, and one engineer at work.—**Home Ticket:** The ore in the stopes at the bottom of 40 ft. west drift, continues from 3 to 4 ft. wide, of fair grade; the perpendicular shaft has been cleaned out to a depth of 30 ft.; 10 tons of ore shipped this week, and about 30 tons at the mine ready for shipment; 10 men at work. The shipments of ore would have been larger but an accident happened to the wagons which bring the ore down from the mines, thus losing four days' work.

SIERRA BUTTES GOLD—Report for November: Sierra Buttes Mine: Total receipts, \$22,135. Total working expenses, including \$2333 spent on mill in level, \$16,474.—**Plumas Eureka Mine:** Total receipts, \$37,889. Total working expenses, \$20,355. The vein in the 300 ft. level below the Mohawk shows considerable improvement as compared with the vein in the 150, and the winze below the 150 ft. level is going down in a body of ore of fair quantity, 8 to 10 ft. wide.

ST. JOHN DEL REY—The directors have received the following telegram from Morro Velho, dated Rio de Janeiro, Dec. 13: Oulaba: 670 tons stamped; yield, 19 oits. per ton.

Dec. 9: Produce for the month of November, 19,000 oits.; value, 7362½; yield, 31 oits. per ton.

STANDARD DIAMOND (Kimberley Mine)—F. B. Salomons, Kimberley, Nov. 9: The finds in washing have considerably improved in quantity, and also slightly in quality. The hauling of the blue and reef was greatly retarded the latter part of last week by the dangerous state of claims belonging to adjoining company. This danger has now been removed, and we are again hauling. Last night we pulled 500 loads of blue with the one engine. We have shipped 3027 carats diamonds. Week's report as follows:—Number of loads, 16 cubic feet of reef hauled, 2877½; number of loads, 20 cubic feet of blue hauled, 1572; number of floor loads washed, 3329; number of carats diamonds found in claims, 36½; number of carats diamonds found picking and breaking up, 3049½. Total value of diamonds, 3857½. 10s.; value of reef hauled, 539½. 11s. 1d. Total of wages sheet, 1057½. 11s. 10d.

—Nov. 16: We were considerably hindered last week by dangerous state of claims belonging to adjoining company. Most of the parts have now slipped, or been knocked down, and Mr. Scott hopes to be able to place the No. 1 engine down below again almost immediately to work the tunnels. A lump of reef slipping in another company's claims, caused the inspector to stop us for two days to trim the jagged pieces. Mr. Jones is doing fair work with the shaft, and will have another pass open this week, and hopes to do better still. He is also erecting a 16 horse-power engine to work with an incline into the east reef. This engine will be at work some time next week, and I am sure will materially benefit this company by assisting to remove some of the reef that slipped the last fall. We have shipped 2801½ carats diamonds. Week's report, as follows:—Number of loads, 16 ft. of reef hauled, 3489½; number of loads, 20 cubic feet of blue hauled, 2144, and 499; 16 cubic feet of blue for an adjoining company. Number of floor loads washed, 3270; number of carats diamonds found in claims 43; number of carats diamonds found picking and breaking up, 2764½; total value of diamonds, about 3000l.; value of reef hauled, 656½. 4s. 6d.; total of wages sheet, 1069½. 3s. 5d.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF THOMAS E. WALES, Esq.,
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 23rd, 24th, and 25th days of January, 1883, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATION must, on or before the 31st day of December, 1882, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.
By order of the Board,
O. HENRY JAMES, Secretary.

N. B.—Persons who do not reside within the District are equally eligible for examination with those who do.

PROMOTERS, DIRECTORS OF COMPANIES, &c.—A FIRM OF GREAT EXPERIENCE OFFER THEIR SERVICES. Can render great help in procuring capital, but will not provide preliminary expenses.
Address, "Lombard," Messrs. Deacons, Leadenhall-street.

JOHN J. HAMILTON, M.E., 9, BUSH LANE, LONDON, E.C.
Thirty Years' practical experience in Quartz and Hydraulic Mining in California, Mexico, Peru, and Chili.

GOLD MINES OF GUAYANA (VENEZUELA).—ALL INFORMATION respecting the above RICH GOLD FIELD can be obtained by existing or intending shareholders, promoters, and others, by addressing "Engineer," care of May's, 159, Piccadilly.

MINING MACHINERY, MILLING MACHINERY Of the MOST APPROVED AMERICAN PATTERNS

GOLD MILLS.

The California pattern of Gold Stamp Mill is universally accepted as the most perfect, economic, and efficient made.

We have over 900 stamps in successful work in the various Western Gold Districts.

SILVER MILLS.

Silver amalgamation in Pans is essentially an American system evolved after years of work on the rich silver mines of Nevada.

We have over 500 Stamps, with necessary pans, settlers, roasting furnaces, &c., all of our own manufacture, at work in different silver camps of the United States, Mexico, and South America, and Philippine Islands, Asia,

CONCENTRATION MILLS

Of the most approved German pattern and arrangement, or with Stamps and Frue Vanner Concentrators for low grade silver ores, light in lead. We have over 20 large German pattern mills at work on lead, zinc, or copper ores, and numerous Vanner mills on ores never before successfully concentrated.

Mining Pumps, Cornish pattern, of the largest sizes, **Hoisting Engines** from 4 h.p. up to the largest direct-acting engines to sink 3000 feet.

SMELTING WORKS.

We have 80 Water Jacket Smelting Furnaces in use from 20 in. circular up to 54 in. by 60 in. for lead and silver smelting; and special High Jacket Furnaces for copper ores.

Engines of any size, plain slide valve, Corliss, compound Corliss. Boilers, all sizes. **Leaching Mills, Hallidie Wire Rope Tramways, Comet Crusher,** with capacity of 12 to 20 tons per hour. **White, Howell, Bruckner, and Stetefeldt Roasting Furnaces, &c.**

We have had twenty years' experience in the manufacture solely of MINING MACHINERY, and have special facilities for shipping to all foreign parts through our New York Office, where all details of clearance, shipment, and insurance are conducted. Our machinery is already well known in Mexico, Peru, Chili, Venezuela, Honduras, and other South American countries.

Correspondence solicited. Descriptive Circulars and Catalogues on application.

FRASER & CHALMERS.

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Fulton and Union Streets, No. 2, Wall Street,
Chicago, Ill., U.S. New York, U.S.
COLORADO OFFICE—CHEESMAN BLOCK, DENVER.

STAMPS.

WANTED, TO PURCHASE, a MODERN BATTERY of from TEN HEADS, or upwards, in good working condition. Address, with price, Mr. DICKENSON, 208, Old Kent-road, London.

THE ORGANOS GOLD MINES, U.S. OF COLOMBIA. THE PRIZE OF 1883.

WANTED, a PROMOTER or SYNDICATE, to TAKE UP a VALUABLE PROVED SETT in the same district as the above, who will be admitted at the net prime cost of the purchase of mines. No commission to anyone charged. Agent undertakes to pay a minimum profit of £10,000 per annum on an outlay of £20,000 for working capital. Purchase money very low.
Apply to J. EDWARDS, Royal Lion Hotel, Dolgelley, N.W.

WANTED,—FOUR or FIVE TONS OF FLAT or CORRUGATED GALVANISED ROOFING, about 20 gauge.
M. FERROWS, "News" Office, St. Austell.

WANTED, by a Mining Engineer, an APPOINTMENT as MANAGER on a GOLD FIELD. He is very active and energetic, and can design, construct, and erect most effective machinery. He is also a good reduction officer.
Address, by letter, to "Energy," MINING JOURNAL Office, No. 26, Fleet-street, London, E.C.

CARTER AND CO., 52, FINSBURY PAVEMENT, LONDON, recommend the PURCHASE of MONKSTON MANGANESE and EAST DEVON CONSOLS for a rise.
Particulars and price to be obtained on application.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 8—Minera.....	61	£ 9 3 0		Nevill, Druce, and Co.
— ditto	60	9 7 6		Adam Eytton.
— ditto	10	9 5 6		Panther Lead Co.
— Park	30	10 0 0		Adam Eytton.
12—Lisburne.....	60	10 3 6		ditto
— ditto	30	8 12 0		Panther Lead Co.
— Cwmystwyth	30	8 15 0		ditto
— East Darren	20	11 9 0		Weston, Sons, and Co.
14—Talargoch	80	9 15 6		Walker, Parker, & Co.
— North Hendre	25	9 8 6		Adam Eytton.
— ditto	25	9 8 6		Walker, Parker, & Co.
— Fron Hall	6	9 2 6		ditto
— East Roman Gravelis 10	9	9 4 6		ditto
15—Dresby Mountain 20	9	9 3 6		ditto

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 8—Minera.....	89	£ 4 5 0		Pascoe Grenfell and Co.
— ditto	74	4 5 0		ditto
— ditto	50	4 2 6		Villiers Spelter Co.
— ditto	50	4 2 6		ditto
— ditto	70	4 5 0		Pascoe Grenfell and Co.
— ditto	70	4 5 0		ditto
— ditto	82	3 16 6		Vivian and Sons.
13—Talargoch and Gronant 30	30	3 11 6		ditto
— ditto	100	4 2 0		J. F. Kimmel.
14—Talargoch	200	3 5 0		ditto

EAST WHEAL ROSE.—It is stated that everything is going on well at this mine, and nothing can be added to the agent's report, which has already appeared: "More good lead stopes are being continually discovered, and the various stopes which have hitherto been worked never looked so rich as they do this day. The dressing department is going forward as usual, and a splendid parcel of lead and another of blende are ready for market." This is the chronicle of the past week, and nothing more satisfactory, it would seem, can be desired. Middleton's lode is still improving.

BRATSBURG.—The general meeting was held on Thursday, and passed off very satisfactorily. The accounts showed a net profit of 3694l. 19s. 5d., and when the ore just arrived and on the way over is realised, the directors propose to pay a dividend of 5 per cent. for the past 12 months, which, being the first year of the company, is most favourable. Next year the returns and profits will be much increased. The reserves (in the ground opened) are valued between 100,000l. and 200,000l. After paying the dividend a balance of profit of about 1000l. will be carried over, and an amount of capital subscribed for and available of above 12,000l.

WHEAL COATES.—The secretary writes that the improvement that has taken place in this mine not only continues, but increases, and the account at the meeting of shareholders is expected to be one of surprises.

EVERY DESCRIPTION OF NEW AND SECONDHAND

ENGINES, BOILERS, PUMPS,

SHAFTING, PULLEYS, BELTING,

AND

MACHINERY GENERALLY.

Before Purchasing, send for

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Containing over 2000 entries of above.

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ALEXANDER SMITH, M. Inst. C. E., CONSULTING ENGINEER and VALUER of IRONWORKS, MINING, RAILWAY, ENGINEERING, and other PROPERTY, PLANT, and MACHINERY, PRIORY STREET, DUDLEY, AND 4, BURLINGTON CHAMBERS, NEW STREET, BIRMINGHAM.

Mr. SMITH has been retained for nearly 20 years by some of the most prominent firms, and has conducted many of the largest valuations that have taken place in the kingdom.

Valuations for Stock Taking or any other purpose upon very reasonable terms

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J. TROWBRIDGE BAILEY,

MINING ENGINEER AND EXPERT,
Member American Institute Mining Engineers.

Detailed and Accurate Reports furnished upon Gold, Silver, Copper, Coal, Properties, Mill Enterprises, &c., in Colorado, New Mexico, and the Central Mining Districts of the United States. Titles examined, Maps constructed, and Reliable Information of any nature concerning Mining Interests furnished promptly.

A List of English and American References of high character can be obtained from Messrs. MARCUS WARD & Co., No. 68, Chancery-lane, London; or MINING JOURNAL Office.

All communications for Mr. BAILEY should be mailed to—
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J. A. JONES,

MINING ENGINEER,

GIJON (ASTURIAS), SPAIN.

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ENGLISH CAPITALIST wishing a CORRECT REPORT on the SILVER MINES of COLORADO will do well to apply to—
Capt. DANIEL ROBERTS, Georgetown, Colorado.

MINING ENGINEER.

ALEX. DEL MAR,

Mining Engineer, late Director of the United States Bureau of Statistics, Mining Commissioner for the United States Monetary Commission &c., 216, SANSONE STREET, SAN FRANCISCO.
Cable Address: "Delmar, San Francisco."—Branch Offices: 61, Broadway, New York; and 77, Cornhill, London, E.C.
Particular attention paid to Hydraulic Mines and Mining Machinery.

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Mines and Mining Claims carefully examined, Assays made of their Ores, and reliable Reports furnished.
Mining Properties bought and sold on commission. Has special facilities for inspecting properties in Mexico.

References by permission:—L. P. BROWN, Esq., Las Vegas, New Mexico; Don F. A. MANZANARES, Las Vegas, New Mexico; His Excellency H. M. HOYT, Governor of Pennsylvania, Harrisburg, Pa.; H. S. PIERCE, Esq., Banker, Scranton, Pa.; Hon. JOHN HANDLEY, President Judge 45th Judicial District, Scranton, Pa.; N. H. SHAFER, Esq., Cashier Third National Bank, Scranton, Pa.; E. B. STURGES, Esq., Attorney-at-Law, Scranton, Pa.; E. W. WESTON, Esq., General Agent Delaware and Hudson Canal Company, Providence, Pa.; Hon. Sir JOHN F. CLARKE, Baronet, Tiltshire, Aberdeenshire, Scotland; R. L. CHANCE, Esq., Birmingham, England; PERCY VALE TAYLOR, Esq., of John Taylor and Son, 6, Queen-street-place, London; JOSEPH ROBERTSON, Esq., 17, Tokenhouse-yard, London.

CAPT. WM. BUGELHOLE (late of Cornwall, England), begs to inform English Capitalists that he is open to INSPECT and REPORT on any MINING PROPERTIES in the UNITED STATES, MEXICO, or SOUTH AMERICA. Fees moderate. First-class English references.
Address, Lansborough, Berkshire County, Massachusetts, United States, North America.

NOTICE.

CAPT. A. FRANCIS, who has had upwards of 40 years' experience in practical mining, would give ANY INFORMATION GRATUITOUSLY as to three Silver-Lead Mines, and one Tin Mine, all in full work, and which will soon enter the Dividend List, when prices must go to a high figure, and not improbably in six months in each case to ten times their now selling price.
Address, Goginan, R.S.O., Cardiganshire.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE
(COLEMAN'S).
A DELICIOUS BEVERAGE AND TONIC

IMPORTANT TESTIMONIAL.

Queen's Crescent, Haverstock Hill, London, March 5th, 1881.
DEAR SIR,—Some time since, being greatly fatigued with overwork and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk.

As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, "without the assistance of a doctor."
I am now giving it to my son, twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad.

Enclosed you have cheque. Please send me two dozen of the "Extract." With thanks for your prompt attention to my last.

I am Sir, yours truly,

GEORGE A. TYLER.

Pints, 30s.; Quarts, 50s. per dozen. Carriage Paid to any Railway Station. Sample Bottle sent free for 33 stamps.

Post-Office Orders and Cheques payable to—

COLEMAN AND CO.

MUSPOLE STREET, NORWICH.

Sold by all Druggists in Bottles 2s. 9d. and 4s. 6d. each. Ask for Coleman's Liebig's Extract of Meat and Malt Wine, and "See that you get it."

In the High Court of Justice.—Chancery Division.

PURSUANT to an Order of the High Court of Justice, Chancery Division, made in an action in the Matter of the Estates of JAMES HICKEY, Deceased—DEBORAH HICKEY against EDWIN FRANCIS COLMER, 1882, H. No. 4485—the CREDITORS of JAMES HICKEY, late of 29, Graham-road, Dalston, in the County of Middlesex, Gentleman (who died on or about the 26th day of February, 1882), are on or before the 12th day of January, 1883, to send by post, prepaid, to Mr. GEORGE JOHNSON, of 3, Lombard-court, in the City of London, the Solicitor for the Defendant, Edwin Francis Colmer, the Executor of the Will of the Deceased, their Christian and Surnames, Addresses and Descriptions, the full particulars of their Claims, a statement of their Accounts, and the nature of the Securities (if any), held by them; or, in default thereof, they will be peremptorily EXCLUDED from the BENEFIT of the said Order.

Every Creditor holding any security is to produce the same before the Hon. Mr. Justice KAY, at his Chambers, situated at the Royal Courts of Justice, Strand, Middlesex, on Friday, the 26th day of January, 1883, at Twelve of the clock at noon, being the time appointed for adjudicating on the claims.

H. F. CHURCH, Chief Clerk.

C. GREGORY, 81, Bishopsgate-street Within, E.C., Solicitor for the Plaintiff.

Dated this 6th day of December, 1882.

CORNWALL.

VALUABLE TIN MINE AND CHINA CLAY WORK, PLANT, MACHINERY, MATERIALS, AND EFFECTS FOR SALE.

IN VOLUNTARY LIQUIDATION UNDER THE COMPANIES ACTS, 1862 AND 1867.

MESSRS. PHILP AND CO. respectfully announce instructions from the Liquidator TO SELL, BY PUBLIC AUCTION, on Wednesday, 20th December instant, at Two o'clock P.M., at the Fortescue (Stannagick) Native Tin, Copper, Silver, and Arsenic Company (Limited), in the parish of St. Stephens in Brannell, and about four miles from St. Austell, in One Lot, and if not so sold then afterwards in several lots, all those sets under which the operations of the said company have been carried on, embracing an extensive area, and several lodes and deposits of China Clay, together with the

MINING AND CLAY WORK, PLANT, MACHINERY.

MATERIALS, AND EFFECTS

Belonging thereto, and being within and upon the said Mines and Works, and including—
ONE 22 inch cylinder ROTARY ENGINE, with two fly wheels, 16 heads of stamps, frames, and passes, one 8 ton boiler, one 24 inch cylinder engine, large fly wheel and working gear, one 10 ton boiler, also a large quantity of other Machinery and materials in general use in mines, and several tons of China Clay.
On the above Mines and Works a large amount has been expended in development, and they may be considered as going concerns, being equipped with two valuable engines and necessary machinery.
For view, application should be made to Capt. PRYOR, on the Mines; and for printed or further particulars to the Liquidator, Mr. DAVID GOURLAY, Grand-poult-road; Messrs. STACPOOLE and SON, Solicitors, Finner's Hall, Old Broad-street, London; or the Auctioneers, at St. Austell and Bodmin.
Conveyances will leave Grand-poult-road and the Queen's Head Hotel, St. Austell, after the arrival of the mid-day trains.

RIPLEY SPELTER WORKS.

TO BE SOLD, BY PRIVATE TREATY, the ABOVE WORKS, situated in the flourishing Colliery District, near Ripley, Derbyshire. They stand upon nearly Five Acres of Freehold Land, bounded on one side by the Canal, and on the other by the Midland Railway with Sidings. There are commodious Buildings and Sheds, a fine Chimney Stack, with all the necessary Engines, Machinery, and Appliances for carrying on the Spelter and attendant Manufactures upon the most approved system, or the Works may be adapted to other purposes.

Also, TWO EXCELLENT COTTAGES, always Tenanted, upon Land with a frontage of about 151 yards to the Ambergate and Ripley Turnpike-road, so that there is ground space sufficient for 17 other cottages, which would be an excellent investment, as they are much needed, owing to the several new collieries being developed near.

Apply to ALEXANDER SMITH, M. Inst. C.E., Consulting Engineer and Valuer, 4, Burlington Chambers, New-street, Birmingham; or Messrs. LEMAN, GROVES, and LEMAN, Solicitors, 51, Lincoln's Inn-fields, London, W.C.

COPPER MINE, OR HALF SHARE, FOR SALE.

THE COPPER MINE OF UBERG, NORWAY, about one Norwegian mile from the port of Tvedestrand, by first-rate road, is OFFERED FOR SALE, OR HALF A SHARE, for providing sufficient working capital. The ore is a chalcopryite, embedded in crystalline schist, in the surface glimmer and talcose schist, and deeper hornblende and talc. The ore is intruded in the rock, sometimes sparsely and sometimes in lumps and veins of great purity. The washed ore is estimated to give from 15 to 30 per cent. of copper and 40 per cent. of sulphur. The upper layer contains more iron and the lower more copper. Two pits have been worked to a depth of about 35 feet, and in breadth from the pit to 25 feet, without reaching the limit. Length can be stated to 600 or 700 feet. Sufficient water power can be disposed of.

ARGENTIFEROUS GALENA MINE at EFTERSTOL.
APATITE at THJORE—Rutile, fluor-spar, white pure felspar, tourmaline, and quartz.
L. W. BECK, Civil Engineer, Arendal.

TIN AND COPPER MINE FOR SALE.

THE BELL VEAN TIN AND COPPER MINE, situated in the parish of GWENNAU, REDRUTH, CORNWALL, is at present FOR SALE, including all the RIGHTS, competent to the Lessee, and all the MACHINERY and PLANT, which is complete, and of the newest description. The prospects of this mine, according to the report of thoroughly qualified experts, are very favourable, and the workings are in such a condition that a very small outlay of capital should develop the rich lodes believed to be within the mine.

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THE

ALLEN STEAM ENGINE GOVERNOR develops the utmost Power, gives Uniformity of Speed under varying loads, and Economises Fuel.

ALSO

PEET'S PATENT VALVE TAP, for Steam, Water, and Gas, from 1/2 inch upwards. Simple, durable, double seats, full way, and all parts interchangeable.

For particulars, apply to—
WHITLEY PARTNERS, RAILWAY WORKS, HUNSLET ROAD, LEEDS.

FOR SALE, BRASS CLACK SEATS AND VALVES, for 18-inch plunger lifts and 17-inch drawing lifts, just as good as new. Apply to M. T. HITCHINS, St. Agnes, Scorrier.

STEAM BOILERS FOR SALE, SECONDHAND, with and without Galloway Tubes, single and double rivetted, working pressure of 60 lbs., 65 lbs., 70 lbs., and 80 lbs. steam pressure. VERY CHEAP.
FIVE BOILERS, 30 feet by 7 feet 6 inches diameter, excellent order.
SIX BOILERS, 30 feet by 7 feet 6 inches diameter, " " " " " "
THREE BOILERS, 26 feet by 7 feet " " " " " "
FOUR BOILERS, 24 ft. by 6 ft. 6 in. " " " " " "

And other sizes in stock. Equal to new.
WINDING ENGINES and COLLIERY PLANT of every description, second-hand, in stock. VERY CHEAP. Write to—
H. HELLWELL and CO., 4, NORTH CORRIDOR, ROYAL EXCHANGE, MANCHESTER.

FOR SALE, a 30 H.P. PORTABLE STEAM ENGINE; with link-motion reversing gear, has drum and gearing complete for winding and pumping.
A 14 H.P. PORTABLE WINDING AND PUMPING ENGINE.
Also a 6 H.P. PORTABLE HOISTING ENGINE.
Apply to—
BARROWS AND STEWART, ENGINEERS, BANBURY.

TO BE LET, ON LEASE, the GRASSINGTON LEAD MINES, in the West Riding of Yorkshire.
Also the CONLEY LEAD MINES, near Skipton.
Address, "The Devonshire Offices," Skipton.

THE COAL TRADES' PROTECTION AGENCY.

CHIEF OFFICE,—32, ARGYLL STREET, REGENT STREET,

LONDON, W.

SOLICITOR—Mr. H. GEORGE SMALLMAN, No. 3, Queen-street, Cheapside, London, E.C.

1.—This Agency has been formed to enable COLLIERIES, COLLIERY AGENTS, and COAL MERCHANTS to obtain all the advantages offered by General Protection Societies without the usual vexatious routine and delay.

2.—To undertake the Collection of Debts on the following inclusive terms—
vis.: For Collection of Debts in Great Britain and Ireland—
On sums between £2 and £20 Five per Cent.
On sums between £20 and £50 Two and a Half per Cent.
On all sums over £50 One per Cent.

On the amount recovered.
Subscribers' attention is particularly directed to the fact that this small inclusive Commission will cover all legal costs incurred. No advance of Court fees required.

Prospectuses sent post free on receipt of trade card by—
H. LAWRENCE HARRIS, Secretary.
CANVASSERS AND TRAVELLERS IN LONDON AND PROVINCES WANTED.

Apply personally to the Manager at the Head Offices, 32, Argyll-street, London, W.; or to Mr. ERNEST HOLAN, 30, Budge-row, London, E.C.; or to Mr. J. J. BROADBENT, 27, Brunsford-street, Manchester.

A MINE MANAGER REQUIRES a RE-ENGAGEMENT with a Gold Company, or would report upon Mining Properties abroad. Can undertake Assaying, Dipping, and erection of Plant; thorough Metallurgist; speaks several languages; has had considerable experience in Europe, India, and Africa; highest testimonials.
Address, "Amalgam," 33, Edwards-square, Kensington, W.

TO SHAREHOLDERS IN INDIAN MINES.

A MINE MANAGER, recently returned from the Colar District, is willing, for a moderate fee, to GIVE RELIABLE INFORMATION regarding the GOLD MINES.

Address, "Colar," MINING JOURNAL Office, 26, Fleet-street, E.C.

AFRICAN GOLD MINING.

A GENTLEMAN, who has just terminated a very successful engagement as Manager and Engineer of one of the best known of the West African Mines, is OPEN TO TAKE ANOTHER ENGAGEMENT. Has long African experience, and the highest references. Liberal terms expected.

Address, "Gold Coast," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

AN ENGINEER, of extensive foreign and commercial experience, can be CONSULTED upon the carrying out of PUBLIC WORKS, RAILWAYS, GOLD and other MINING, &c., &c. Has executed Engineering and Mining Operations in the East Indies, Australia, and South America. Speaks Spanish and Hindustani. Can leave England at the shortest notice to report upon properties in any part of the world.

Address, "C. E.," care of May's, 159, Piccadilly.

NATIONAL PROVINCIAL BANK OF ENGLAND (LIMITED).

Bishopsgate-street, Corner of Threadneedle-street, London, E.C.,

December 12, 1882.

The Directors of the National Provincial Bank of England (Limited) hereby give notice that a HALF-YEARLY DIVIDEND at the rate of EIGHT PER CENT. per annum, and a BONUS of FIVE PER CENT., will be PAYABLE on the bank's shares on and after the 12th day of January next, the warrants for which may be obtained at the Head Office, the Branches, or by post, if desired.

The Transfer Books will be closed on Monday and Tuesday, the 18th and 19th inst.

By order of the Court of Directors,

T. G. ROBINSON,

FRED. CHURCHWARD,

Joint General

Managers

ONTARIO SILVER MINING COMPANY.

DIVIDEND No. 86.

THE REGULAR MONTHLY DIVIDEND AT FIFTY CENTS (2s.) PER SHARE has been DECLARED for November, PAYABLE at the Office of the Transfer Agents, WELLS, FARGO, and Co., 65, Broadway, on and after the 15th inst.

The above Dividend is payable at our office on all Stock registered in England.

EIVES AND ALLEN, Agents, 99, Cannon-street, E.C.

MINE "EL CALLAO."

GUAYANA, VENEZUELA.

COUPONS OF SHARES 322

Gold in bars produced in the month of October, 1882, and remitted to Messrs. Baring Brothers and Co., London, 81/65/2 czs.

DIVIDEND distributed for each coupon, \$300.

(Signed) A. LICIONI, President.

(Signed) VICTOR T. GRILLET, Treasurer

THE MINAS AND RIO RAILWAY COMPANY (LIMITED).

SIX PER CENT. DEBENTURES—HALF-YEARLY DRAWING.

Notice is hereby given, that the THIRTY-THREE DEBENTURES, the particulars and numbers of which are hereunder specified, amounting to £3300, were THIS DAY DRAWN BY LOT, for payment at par, in accordance with the conditions under which the above Debentures were issued, at the offices of the company, 8, Victoria Chambers, Westminster, in the presence of Mr. JOHN BRIDGES, Notary Public, London, and that the drawn Debentures will cease to bear interest on the 31st instant, and will be PAID OFF on or after the 30th day of January, 1883, by the said company, upon the same and all interest coupons not then due being left at the National Provincial Bank of England, 112, Bishopsgate-street, London, E.C., three clear days for examination.

PARTICULARS AND NUMBERS OF THE DRAWN DEBENTURES.

ISSUE OF £400,000.

20	Debentures of £100 each, amounting together to	£2000
120	1133	1536
190	1238	1944
1098	1517	2163
2418	2920	3256
3016	3418	3563
3421	3693	

ISSUE OF £350,000.

13	Debentures of £100 each, amounting together to	£1300
4148	4646	5443
4732	4741	5514
6233	6423	6871
6860	7042	7205

33 Debentures of £100 each, amounting together to

By Order, R. C. PRESTON, Secretary.

Present—JOHN BRIDGES, Notary Public, of the firm of Daft, Bridges, and Watts, 5, Nicholas-lane, E.C.

No. 8, Victoria Chambers, Westminster, S.W., 12th December, 1882.

THE CALIFORNIA GOLD MINE COMPANY (LIMITED), OF COLORADO.

Notice is hereby given, that the FIRST ORDINARY GENERAL MEETING of the shareholders in this company will be HELD at St. Michael's Hall, George-yard, Lombard-street, in the City of London, on THURSDAY, the 28th day of December, at One o'clock P.M., to receive the accounts, balance-sheet, and reports of the directors and auditors for the year ending 31st May last, and for the election of auditors for the ensuing year.

The Transfer Books of the company will be closed from the 22nd to the 30th December, both days inclusive.

By order of the Board,

EDWARD PENMAN, Secretary.

58, Lombard-street, London, E.C., December 13th, 1882.

RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders of the Richmond Consolidated Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on WEDNESDAY, the 20th day of December, 1882, at Three o'clock in the afternoon, to receive the report of the directors for the half-year.

By order of the Board,

HUBERT AKERS, Secretary.

44, Coleman-street, E.C., 12th December, 1882.

THE MYSORE GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that the THIRD ORDINARY GENERAL MEETING of this company will be HELD at the Cannon-street Hotel, in the City of London, on THURSDAY, the 21st day of December, 1882, at One o'clock, P.M.:—
To receive the reports and accounts.
To elect the directors and auditors in place of those retiring, and for other general business.

By order of the Board,

W. G. WILLIAMS, Secretary.

Registered Office: 6, Queen-street-place, London, E.C., 9th December, 1882.

FLAGSTAFF DISTRICT SILVER MINING COMPANY (LIMITED).

20, Bucklersbury, London, E.C., 9th December, 1882.
Notice is hereby given, that the SECOND ORDINARY GENERAL MEETING of this company will be HELD at the above address on WEDNESDAY, the 20th inst., at Two o'clock in the afternoon precisely, to receive the report of the directors, pass the accounts, appoint auditors, and transact such other business of the company as may be incidental thereto, which may properly be transacted at an ordinary general meeting.

Also to consider the best means of raising funds to continue the works and complete the sinking of the main shaft to the 7th level, where from Professor Vincent's report, there is reason to expect that the rich vein which runs directly towards, and within 80 ft. of, the boundary of this company's property, and which is being worked in the adjoining mine at a large profit, will be struck, and large returns made, and to pass such resolutions with respect thereto as the meeting may determine.

By order,

C. J. CADOGAN, Secretary.

HERBERTON (WILD RIVER) TIN LODES, NORTH QUEENSLAND.

Every information relative to the progress of lode-tin mining in the Wild River district (termed by geologists "The Cornwall of Australia") can be obtained by communicating with the undersigned.

CHARLES JENKIN.

"Herberton Advertiser" Office, Herberton, September, 1882.

CALIFORNIAN AND EUROPEAN AGENCY.

609, MONTGOMERY STREET, SAN FRANCISCO, CAL.

J. JACKSON, Manager

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Alfred Nobel



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NOBEL'S EXPLOSIVES COMPANY, LIMITED
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Head Office: 149, West George Street, Glasgow.

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WESTQUARTER WORKS, POLMONT STATION, STIRLINGSHIRE.

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THE COTTON POWDER COMPANY (LIMITED)

RECOMMEND TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, THEIR

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AS BEING THE SAFEST, CHEAPEST, AND STRONGEST OF ALL EXPLOSIVES.

TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any Nitro-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

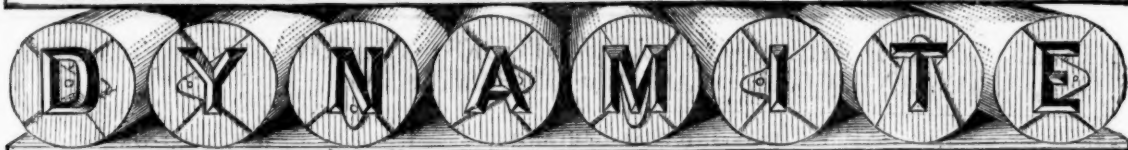
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FOR MINING AND QUARRYING PURPOSES.

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HAYLE, CORNWALL.

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of the largest and most approved kinds in use, SUGAR MACHINERY,
MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL.
SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF
HUSBAND'S PATENT PNEUMATIC STAMPS

SECOND-HAND MINING MACHINERY FOR SALE,
IN GOOD CONDITION, AT MODERATE PRICES—viz.,
PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES,
STEAM CAPSTANS; ORE CRUSHERS; BOILERS and FITWORK of
various sizes and descriptions; and all kinds of MATERIALS required for
MINING PURPOSES.

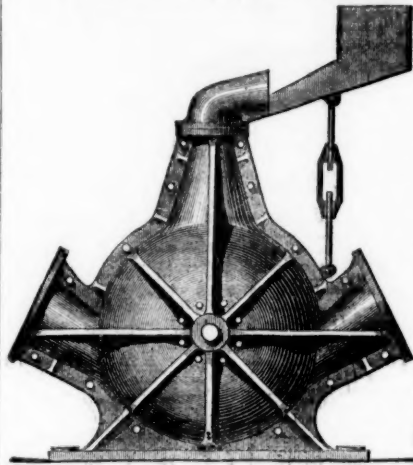
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MINERALS, CHEMICALS, CEMENTS, CEREALS, &c.

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tion.

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SLIDE VALVES,

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CYLINDERS, &c.

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SHEET, RODS
TOOLS, &c.

STEAM
FITTINGS

SOLE

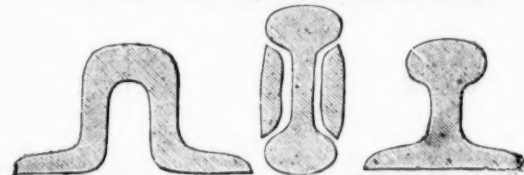
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LONDON, S.E.

JOHN BEATSON AND SON,
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IRON AND STEEL RAILS, of all sections, from 10 to 86 lbs. per
yard, new perfect, new slightly defective, or second-hand, with Fish-plates,
Bolts and Nuts, Chairs, Spikes, and Points and Crossings to match, when re-
quired.

STEEL AND IRON WIRE ROPES, LOCOMOTIVE ENGINES, &c., &c.
BARS, PLATES, SHEETS, &c.
STEEL OF ALL KINDS. PIG IRON OF ALL KINDS
Delivered at all Railway Stations and Ports in Great Britain.

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SAFETY FUSE
MANUFACTURER.



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Blasting in Mines, Quarries, or for Submarine Purposes; and is
adapted for exploding Gunpowder, Dynamite, or any other Explosive;
and is made suitable for exportation to any part of the world
Price Lists and Sample Cards on application.

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SMALL ENOUGH TO CARRY IN THE POCKET ANEROID CASE.

PRACTICAL HYPSONOMETRY: A Method of DETERMINING
ALTITUDES (Heights of Mountains and Depths of Mines) accurately and
almost instantaneously, with the Aneroid Barometer, WITHOUT TABLES.
Price One Shilling, post free

London: MINING JOURNAL Office 26, Fleet-street, E.C.

NON-DIVIDEND MINES—continued

NON-DIVIDEND MINES—continued

<i>Shares.</i>		<i>Paid.</i>	<i>Lost.</i>	<i>Clas.</i>
25000	North Grosvenor,* s-s, Cardighr.	1 0 0	1 1/2	1 1/2
12000	North Hrodsotof, s, Liskeard	0 12 6	0	1 1/2
2000	North Melton,* c, m-s, Devon	1 0 0	0	1 1/2
6000	North Penentrathl, t, Gwennap	2 11 6	0	1 1/2
2326	North Penentrathl, t, St. Agnes	1 0 0	0	1 1/2
8000	Northrin, s, Dartmouth	8 17 10	0	1 1/2
40000	Okei Tor,* t, c, s, Caladoc	1 0 0	0	1 1/2
80000	Old Shepherds s, Cornwall	1 0 0	0	1 1/2
60000	Owen Veau & Tregur,* t, c, Marazion	1 0 0	0	1 1/2
12000	Pandora,* t, Carnarvon	2 0 0	0	1 1/2
45000	Parys Corporation, c, Anglesea	1 0 0	0	1 1/2
7500	Pateley Bridge, t, Yorkshire	1 0 0	0	1 1/2
2000	Pein-an-dra, t, Redruth	3 7 0	0	1 1/2
6000	Penryn Wood, c, Lanvery	0 2 0	0	1 1/2
12000	Pennant, s-s, North Wales	5 0 0	0	1 1/2
20000	Pengargre, t, Carmarthenshire	1 0 0	0	1 1/2
12000	Pen-y-Osced, t, Flintshire	1 0 0	0	1 1/2
15000	Perran Consols,* s-l	1 0 0	0	1 1/2
12000	Perran Wheal Alfred, c	0 2 6	0	1 1/2
3000	Polebrook, t, Crown	0 12 6	0	1 1/2
10000	Poleose, t, Cornwall	1 5 0	0	1 1/2
10000	Port Royal,* s-s, Carnarvonshire	2 0 0	0	1 1/2
12000	Prince Nigel, t, c, s-l, St. Agnes	1 0 0	0	1 1/2
12000	Prince of Wales, t, Caladoc	0 19 6	0	1 1/2
35000	Rayonal,* t, St. Colum	0 0 0	0	1 1/2
36000	Russell United, s, Tavistock	0 15 6	0	1 1/2
30000	Silver Hill,* s, Callington	1 0 0	0	1 1/2
40000	Sinclair,* s, b, Wiltford	1 0 0	0	1 1/2
40000	Sorbridge,* c, Horrabridge	1 0 0	0	1 1/2
6000	South Carbis, t, c, Redruth	0 10 0	0	1 1/2
42000	So. Devon Unit,* c, Buckfastleigh	1 0 0	0	1 1/2
5000	South Dolcoath, t, c, Illogan	0 19 0	0	1 1/2
6000	South Penentrathl, t, Gwennap	2 13 6	0	1 1/2
6000	South Tolcarne, t, c, Camborne	5 11 6	0	1 1/2
2043	South Wheal Crofty, c, Illogan	3 4 6	10	1 1/2
40000	Tamar, s-l, Bearaunt	1 0 0	0	1 1/2
110000	Tankerville St. Consols, t, Salop*	1 0 0	69	1 1/2
20000	Tin Hill, t, St. Stephens	1 0 0	13	1 1/2
12000	Trebartha Lemanac, t, Northill	0 1 6	3	1 1/2
6000	Trebartha Lemanac, t, Northill	3 10 0	3	1 1/2
10000	Trevaun,* t, c, Gwennap	1 0 0	1	1 1/2
60000	Trevaun United,* t, Cornwall	1 0 0	1	1 1/2
8000	Trevaunaco, t, St. Agnes	0 3 0	1	1 1/2
12000	Trevice Consols, t, c, Gwennap	0 5 0	0	1 1/2
35000	Un. Van & Glyn,* t, (s 17500 pref. sh)	1 0 0	0	1 1/2
1000	Vaughan,* t, Cardiganshire	10 0 0	0	1 1/2
8000	Victor, t, Glyn, Flintshire	0 10 0	0	1 1/2

let Seton, c, Camborne	12	0	0...	5
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3500	Vincent,* t, Altarnun.....	1	0	0
12000	West Asheton, t, Carnarvon	1	0	0
12000	West Cardanor, c, St. Cleer	0	7	9	..	1½	14 1½
3000	W. Craven Moor, t, Pateley Bridge	18	0	0
1200	West Crebor, c, Tavistock	0	9	0	..	¾	¾
10240	West Devon Consols, c, Calstock	1	2	0	..	¾	¾
10000	West Godolphin, t, c, Breage	1	1	0	..	1½	1½
2000	West Lulworth, c, Bournemouth	1	0	0	..	1	1
3000	West Mary Ann, t, Menheniot	1	0	0	..	1	1
6030	W. Pateley Bridge, t, Yorkisburgh	1	0	0	..	1	1
6000	West Polbreten, f, c, St. Agnes	0	5	6	..	¾	¾
5190	West Poideise, St. Day]	6	5	0	..	2	2
2048	West Wheel Frances, t, Illogan]	34	13	3	..	9	24 3
3000	West Wheal Peevor, t, Redruth	3	0	6	..	9	9 6
2400	West Wheal Seton, c, Camborne]	15	0	0	..	20	15 20
6000	Wheel Agar, c, Illogan]	16	6	0	..	15	12 15 ½
6144	Wheel Bassett, c, Illogan]	7	9	0	..	9	7 8
3000	Wheel Boys, t, Redruth	0	16	0	..	18	¼ 18
50000	Wheel Castle, t, c, St. Just	1	0	0	..	1½	1½
12000	Wheel Contes, t, St. Agnes	0	4	0	..	1	1
2535	W. Gont, & No. Tres., t, c, Gwennap	2	2	0	..	1½	1½ 1
50000	Wheel Elizabeth, c, Cornwall	1	0	0	..	—	—
12288	Wheel Jane, t, Kenj	2	1	0	..	1½	¾ 1
12000	Wheel Jewell, c, St. Hilary	1	0	6	..	¾	¾ 1
25000	Wh. Honey and Trellawney, s-t, Lisk	2	0	0	..	2½	2 ½ 2 ½
12000	Wheel Lucky, t, Callington	0	2	3	..	¾	¾ 1
2000	Wheel Owles, t, St. Just]	7	3	0	..	8	7 8
6000	Wheel Prussia, & Cardew, f, c, Rdrth	4	0	0	..	1½	1 ½ 1
20000	Wh. Silver, & Langtree, s-t, Camelfd.]	1	0	0	..	1	1 1 1
6000	Wheel Sisters, t, c, Redruth	3	10	0	..	1½	1 ½ 1
4096	Wheel Uny, t, c, Redruth	16	19	6	..	5	3 5 3
60000	Yeoland Consols,* t, Cornwall.....	0	12	6	..	¾	¾ 1
4000	Ystwith,* t, Cardigan	1	0	0	..	¾	¾ ¾

b, blende; c, copper; g, gold; l, lead; s, silver; sl, slate;
s-l, silver-lead; t, tin; z, zinc; i, iron; a, arsenic.

*Limited Liability Companies; † quoted on the Stock Exchange
‡ have paid dividends.

GAS COMPANIES

ISSUE, SHARES.		GAS COMPANIES.	
5000	20	Bahia [L]	all
10000	5	Bombay [L]	all
10000	5	Ditto, New [L]	all
29700	Stk	Brentford Consolidated	100
14000	20	British	all
50000	Stk	Commercial	100
20000	20	Continental Union [L]	all
50000	20	do. New, 1859, 1872	all
10000	20	do. do. 7 per cent. Preference	all
23406	10	European [L]	all
94850	Stk	Gaslight and Coke, A. Ord.	100
284200	Stk	do. 4 per cent. Deb. Stock	100
5000	10	Hong Kong and China	all
280000	Stk	Imperial Continental	100
38600	Stk	London	100
12000	9	Mails & Mercantile [L]	all
100000	Stk	Metrop. of Melbourne 5 p.c. Deb.	all
25000	20	Monte Video [L]	all
10000	5	Ottoman [L]	all
30000	5	Oriental [L]	all
27500	20	Rio de Janeiro [L]	all
500000	Stk	South Metropolitan	100
50000	Stk	Ditto, ditto	100

ISSUE, SHARES.		TRAMWAYS.	
40000	5	Anglo-Argentine [L]	all
10000	10	Barcelona [L]	all
7140	10	Belfast Street Tramways	all
3050	10	Birkenhead, Ordinary	all
3000	10	Ditto, 6 per cent. Preference	all
9290	10	Bristol [L]	all
25000	10	Bordeaux Tram & Omnibus [L]	all
3000	10	Boston [L]	all
24000	10	Dublin	all
14690	10	Edinburgh Street Tramways	all
35000	10	Glasgow Tramway & Omn. [L]	all
10000	10	Hughes Loco. and Tram. works	all
7500	10	Hull Street Tramways	all
7500	10	Imperial [L]	all
34000	10	Liverpool Unit. Tram & Om. [L]	all
15000	10	London Street Tramways	all
60000	10	North Metropolitan	all
8000	10	Nottingham and District [L]	all
15947	10	Provincial [L]	all
6000	10	Sheffield	all
5000	10	Southampton	all
8000	10	Sunderland [L]	all
12000	10	Tramways of France [L]	all
18500	10	Tramways of Germany [L]	all
20000	6	Tramways and Gen. Works [L]	all
40000	10	Tramways Union [L]	all
25000	10	Vale of Clyde	all
7200	10	Wolverhampton [L]	all

SHARES.		TELEGRAPH COMPANIES.	
Stk.	Anglo-American	100	0
10	Brazilian Submarine	10	0
10	Cuba	10	0
10	Direct Spanish	9	0
20	Direct United States Cable	10	0
10	Eastern	10	0
10	East. Exten. Austr. and China	10	0
10	German Union	10	0
10	Great Northern	10	0
25	Indo-European	25	0
10	London Platino Brazilian	10	0

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London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 25, FLEET STREET, E.C., where all communications are requested to be addressed.—December 18, 1898.